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JUN 1 1918

STATE OF UTAH

★ FOURTH BIENNIAL REPORT
STATE ROAD COMMISSION
1915 AND 1916

U1.



STATE OF UTAH

FOURTH BIENNIAL REPORT
STATE ROAD COMMISSION
1915 AND 1916

STATE OF UTAH

FOURTH BIENNIAL REPORT
STATE ROAD COMMISSION
1915 AND 1916

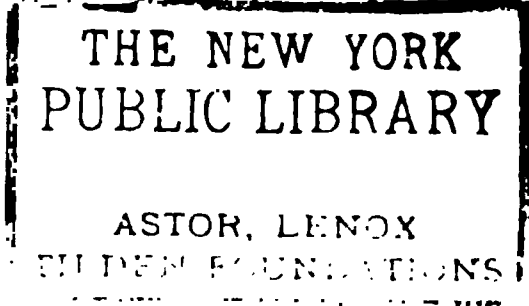
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1917

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ASTOR, LENOX AND
TILDEN FOUNDATIONS

R 1926 L

MISCELLANEOUS			
Cost per Mile	KIND	Cost	Total Cost of All Work
\$ 24.95	Temporary bridge work; culvert repair.	\$ 222.07	\$ 13,875.02
6.65	Repair to culverts; drainage; fences; troughs; retaining walls; etc.	11,795.89	44,878.27
62.44	Repair to culverts; drainage; etc.	364.82	55,942.73
116.16	Inspection of roads; bridge repair; culvert work; drainage; mile post; retaining wall; etc.	4,067.92	30,780.39
83.42	Bridge repair; culvert repair; drainage; fences; loading trap; screening plant work; etc.	1,174.57	54,152.25
39.02	Bridge repair; culvert repair; drainage; fences; retaining walls; etc.	879.00	11,311.33
35.93	Inspection of road; road traffic census; bridge repair; culvert work; troughs; etc.	768.42	23,369.73
293.40	Inspection of road; bridge repair; etc.	452.56	9,442.55
32.32	Supplies for road; bridge repair; culvert repair; retaining walls; fords; etc.	4,419.65	12,069.05
26.81			



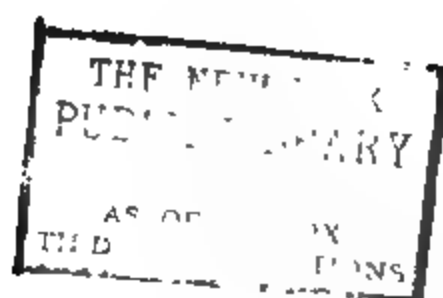
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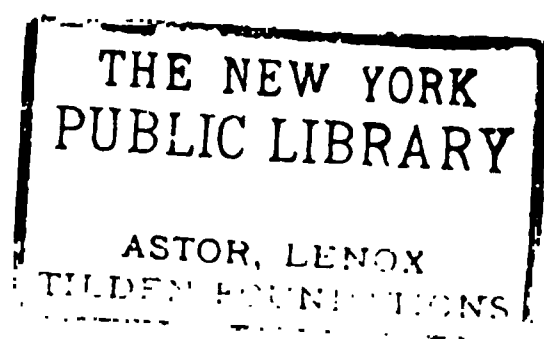
ASTOR LENOX
TILDEN FOUNDATIONS

Cost per Mile	
2	31.8
2	3.4
12	35.4
4	17.9
12	2.7
12	1
12	4

E		MISCELLANEOUS		
	Cost per Mile	KIND	Cost	Total Cost of all Work
62	\$ 13.96	Bridge repair; bridge removal; temporary bridge work; culvert repair; retaining walls and fences; etc.	\$ 240.36	\$ 10,210.01
63	7.14	Inspection of roads; bridge repair; bridge removal; culvert work; drainage; retaining walls; fences; repair to equipment; etc.	1,265.64	17,496.10
12	36.74	Inspection of roads; road traffic census; bridge repair; temporary bridge work; culvert repair; culvert work; drainage; retaining walls; fences; equipment depreciation; supplies; etc.	1,522.57	20,531.91
.40	17.50	Inspection of roads; bridge repair.	504.14	7,991.46
.50	32.79	Road traffic census; repair to culverts; drainage; fences; bridge repairs; repairing screening plant; etc.	1,433.21	45,191.21
.58	9.47	Inspection of road; bridge repair; repair to culverts; fences; etc.	564.08	6,375.23
.00		Inspection of roads; culverts; etc.		

11
33
1
90
4





(Davis No. 75.) **Pool Curing of Concrete Road between
Salt Lake and Ogden.**

LETTER OF TRANSMITTAL.

Salt Lake City, Utah, December 1, 1916.

WILLIAM SPRY, Governor of Utah.

Dear Sir: In accordance with Section 2, Chapter 81, Session Laws of Utah, 1915, the Fourth Biennial Report of the State Road Commission, for the years 1915 and 1916, is hereby submitted.

Respectfully,

**E. R. MORGAN,
Secretary-Engineer.**

COMMISSIONERS.

WILLIAM SPRY, Chairman

Governor of Utah

Salt Lake City, Utah

RICHARD R. LYMAN, Vice Chairman

Professor of Civil Engineering at the University of Utah

Salt Lake City, Utah

W. D. BEERS

State Engineer

Salt Lake City, Utah

JESSE D. JEWKES

State Treasurer

Salt Lake City, Utah

WILLIAM PETERSON

Professor of Geology at the Agricultural College of Utah

Logan, Utah

OFFICERS AND EMPLOYEES

IN THE OFFICE OF THE
STATE ROAD COMMISSION.

E. R. MORGAN, State Road Engineer and Secretary

HUGH C. LEWIS, Bridge Engineer

LEVI MUIR, JR., Assistant Engineer

W. W. GARDNER, Assistant Engineer

A. E. CHRISTENSEN, Assistant Engineer

HOWARD BARKER, Designer

F. L. ALLEN, Assistant Engineer

ROBERT FLAGEL, Assistant Engineer

E. C. KNOWLTON, Assistant Engineer

W. M. WOLSEY, Assistant Engineer

IDA M. McCOMSEY, Chief Clerk

A. R. EMERY, Purchasing Clerk

EDNA M. TOMLINSON, Bookkeeper

ELEDA ANDERSON, Assistant Bookkeeper

AGNES McNEIL, Stenographer

CLAUDE E. HAYES, Stenographer

NOTE.—*The above list represents all employees having served at least twelve months' time during the biennium.*

STATE ROAD AGENTS.

COUNTY	AGENT	ADDRESS
BEAVER.....	August Thiessen.....	Milford
BOX ELDER.....	Brigham Jensen.....	Brigham City
BOX ELDER.....	Peter Weidman.....	Bear River City
BOX ELDER.....	T. P. Meister.....	Tremonton
CACHE.....	T. H. Humphreys.....	Logan
CACHE.....	C. W. Sanders.....	Logan
CARBON.....	F. S. Dunlevy.....	Price
CARBON.....	Chas. Leger.....	Price
DAVIS.....	C. T. Bennett.....	Kaysville
DUCHESNE.....	J. L. Taylor.....	Myton
EMERY.....	F. A. Killpack.....	Ferron
GARFIELD.....	Joseph McCullough.....	Panguitch
GRAND.....	J. P. Miller.....	Moab
GRAND.....	D. A. Johnson.....	Moab
IRON.....	H. M. Hendrickson.....	Parowan
JUAB.....	Colin McMurphy.....	Silver City
JUAB.....	Chas. A. Hall.....	Nephi
KANE.....	H. W. Esplin.....	Orderville
MILLARD.....	J. R. Bennett.....	Deseret
MORGAN.....	W. H. Toone, Jr.....	Croyden
PIUTE.....	Ben Lewis, Sr.....	Circleville
RICH.....	George Kennedy.....	Randolph
SALT LAKE.....	George Holmberg.....	Salt Lake City
SAN JUAN.....	Wayne H. Redd.....	Blanding
SANPETE.....	Martin Isaacson.....	Ephraim
SEVIER.....	C. W. Hawley.....	Monroe, R. F. D.
SUMMIT.....	A. H. McCormick.....	Kamas
TOOELE.....	G. M. Matthews.....	Grantsville
UINTA.....	Sylvanus Collett.....	Vernal
UTAH.....	Marion Clinger.....	Provo, R. F. D.
WASATCH.....	Hugh W. Harvey.....	Heber, R. F. D.
WASHINGTON.....	E. R. Higbee.....	Toquerville
WAYNE.....	W. H. Heaps.....	Teasdale
WEBER.....	R. S. Corlew.....	Ogden

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FOURTH BIENNIAL REPORT OF THE STATE ROAD COMMISSION 1915-1916

GENERAL STATEMENT

The personnel of the State Road Commission has remained the same throughout the biennium, and the positions of State Road Engineer and Secretary, Bridge Engineer, Chief Clerk and the various Assistant Engineer positions, have also continued practically without change during the past two years.

The general system of procedure in the handling of the more important affairs of the Commission has been practically the same as in the previous biennial period. The same assignment of counties to the various Commissioners for their special interest and responsibility, has obtained as heretofore, the assignment being as follows: Box Elder, Cache, Juab, Morgan, Rich, Summit and Tooele to Commissioner Wm. Peterson; Beaver, Davis, Millard, Salt Lake, Sanpete, Sevier and Utah to Commissioner Richard R. Lyman; Carbon, Duchesne, Emery, Grand, San Juan, Uinta, Wasatch and Weber to Commissioner Jesse D. Jewkes; and Garfield, Iron, Kane, Piute, Washington and Wayne to Commissioner W. D. Beers. The actual duties and responsibilities of the Commissioners, however, extend over all matters of business which are undertaken by the organization and the above mentioned segregation of authority has been nominal only, being of the nature of a committee assignment.

As heretofore, the State Road Engineer and Secretary has been given charge of the engineering and supervision of all construction work and the overseeing of the engineering and clerical office work of the Commission.

GENERAL STATEMENT

The State Road construction work is rapidly increasing in volume from one biennium to the other, and due to the valuable experience that each year adds to the general experience of the organization, the construction work is improving in quality and efficiency from year to year. Labor saving machinery is being used more than ever before, and the greatest attention possible is rendered in the selection of first class materials for the various kinds of work. Motor tractors are now used instead of horses on all extensive grading projects, and power loading and unloading plants are used on all large surfacing projects. The surveying, designing and inspecting are also maintained to the highest standard possible.

The latest and most efficient methods are used in the construction of concrete roads, a careful study having been made by the Commission of this type of road construction during the past four years. During the past biennium 29.42 miles of concrete roads were constructed, and in the latter part of 1916 as many as five complete concrete road organizations were working at one time on the State Roads, three of which were being operated by the department and two by contract. Up to the present time a total of about thirty-seven miles of State Roads have been constructed of concrete, amounting to more than 370,000 square yards of surfacing. The concrete road work completed to date in the various counties of the State and the years in which the work was accomplished, are indicated in the set of curves included in the engineering report following herewith, and further descriptions of the concrete road accomplishments and methods of construction are to be found in the reports of the various counties.

During the past two years, all State convicts available for road work have been used to great advantage for practically twelve months in each year. During the past two summers they have been used in the construction of concrete roads in Davis and Weber Counties, while in the shorter winter periods they have been used in the Dixie region in

GENERAL STATEMENT

Washington County and in the Sevier Canyon in Sevier County. In the winters their labors were employed in the construction of earth roads, bridges and culverts. From fifty to sixty convicts have been available at any one time during the biennium.

During the eight years of existence of the State Road Commission the accomplishments of the organization have rapidly increased in accordance with the rapid increase in the funds available for road construction work. During the past biennium 706.58 miles of road have been graded, 259.18 miles have been surfaced, 69 bridges and 1,567 culverts have been constructed, and in addition to this work, there has been a great amount of maintenance work and miscellaneous construction work throughout the State. Complete tables of construction work and the costs of same are to be found in the various County reports.

The biennial expenditures of the State Road Commission indicate more clearly than anything else the rapid growth of the Good Roads movement. The total expenditures in the Third Biennium were \$898,274.60, while in the Fourth Biennium they amounted to \$1,395,238.96. The accompanying curves indicate the strides made during the life of the Commission, as expressed in expenditures, designations, and average expenditures per mile of designated State Roads. There were 3,387 miles of State Roads on December 1, 1916.

EXPENDITURES

(1909-1910) (1911-1912) (1913-1914) (1915-1916)
BIENNIAL PERIODS

RECOMMENDATIONS

The following recommendations are made by the State Road Commission for the consideration of the Twelfth Session of the State Legislature:

1. That Chapter 97, Session Laws of Utah, 1909, be repealed.

2. That the Law with reference to the widths of rights of way for State Roads, County Roads, streets, lanes, alleys, etc., be changed so that the County Commissioners will be required to obtain for State Roads, rights of way such as will meet with the approval of the State Road Commission and that rights of way for all roads, streets, etc., in counties outside of municipalities must be obtained by the County Commissioners and to their satisfaction, and that rights of way for all city streets, lanes, alleys, etc., when obtained must be satisfactory to the officials of the town in which such rights of way are to be obtained.

3. That the annual appropriation of \$100,800.00 be maintained or increased if possible.

4. That the sum of \$25,000 be appropriated for use in buying road making and road maintaining equipment, and that the Act appropriating the money require the State Road Commission to depreciate the equipment from time to time, charging such depreciation against the county or counties in which it is used so that the amount of equipment on hand plus the amount of depreciation charged would be equal to the sum appropriated.

5. That Sections 2, 8 and 12 of Chapter 119 of Session Laws of Utah, 1909, be repealed.

6. That assent to the provisions of the Federal Aid Road Act approved July 11, 1916, be given.

7. That the State Road Commission be authorized to apportion among the counties all of the Federal Aid Road Funds and be given full power to recommend projects for improvement to the Secretary of Agriculture under the terms of said Act.

RECOMMENDATIONS

8. That Chapter 120, Laws of Utah, 1909, be repealed and that a law be enacted which would permit of the organization of special road and sidewalk districts contemplating improvements which can not be rightfully made by the County Commissioners or the State Road Commission without material assistance from the holders of property within such districts, and that such law give such power to the County Commissioners with the approval of the taxpayers within such district to levy a tax upon the assessed property of such a district as well as a tax upon the property directly abutting upon a street to be improved.

9. That all existing and proposed road legislation be submitted to the Solicitor of the Department of Agriculture with a view of ascertaining whether changes should be made in order that there might be a wholesome co-operation between the State and Federal authorities in the construction and maintenance of roads.

10. That a Law be enacted authorizing County Commissioners and City Commissioners to borrow money equal to the sum to be raised as a State Road Tax after such tax has been levied, and that County Commissioners be empowered to borrow the amount required by the State Road Law to be appropriated by them in order that the sum offered by the State might be obtained by the counties.

11. That the State Road Commission and the State Board of Corrections operate the convicts on State Roads with the following in mind: That the convicts be charged with the cost of construction and camp equipment, that an account be kept with the convicts collectively and individually, that interest on the cost of construction and camp equipment be charged to the convicts collectively with the depreciation and guard hire, and that each convict be charged with the cost of his food and clothing, and that the collective charges be prorated among the individuals in accordance with the time spent at the camp, that each individual receive a credit for his services depending upon their value and that the difference between such credits and charges be divided should any exist, by the State Board of Corrections so that

RECOMMENDATIONS

the dependents of the prisoner, or those made dependent on account of his violation of the Law will benefit, and that the remainder of the credit be held for the individual use of the convict by the State Board of Corrections to be used for his benefit during the period of incarceration or after such period. We further recommend that the cost of moving from place to place, and to defray all expenses excepting food and clothing for the convicts during the periods of non-productiveness be paid from an appropriation allowed the State Board of Corrections.

REPORT OF THE ENGINEERING OFFICE OF THE STATE ROAD COMMISSION

ORGANIZATION: The engineering department of the State Road Commission has been organized in the same manner as during the previous biennium, but has been somewhat greater in size. The organization has consisted of the State Road Engineer, the Bridge Engineer, seven assistant engineers, one designer and one draftsman. The assistant engineers are used for field work during the construction season and for office work during the winter months. A few of the field engineers, however, are not employed regularly, in which case they are used in the construction season only. In each county there is at least one State Road Agent representing the Commission in his particular territory. These State Road Agents are also a part of the general engineering organization, as they have charge of most of the road equipment and supervise a great deal of the road construction.

PURPOSES: The purposes of the engineering department are briefly: to survey, engineer, supervise and inspect the construction of all roads, bridges and culverts and the maintenance of same, on all officially designated State Roads. The duties of the State Road Commission are defined by Statute (See Chapter 81, 1915 Session Laws of Utah), and the purposes of the engineering department are more fully set forth in detail in the Third Biennial Report of the Commission.

ACCOMPLISHMENTS: Complete tables of all the State Road Construction work in the State are included in the various county reports. The reports are segregated into precincts for the year 1915 and into roads for the year 1916. The work is classified into the following divisions; graded roads, surfaced roads, bridges, culverts, maintenance and miscellaneous construction, and the total costs and unit costs are given for every part of the work. A condensed summary

ENGINEERING REPORT

of all of the work accomplished in the twenty-eight counties during the past two years is included at the end of this section of the report. It will be observed that the total costs of all work for the two years amounted to \$1,268,433.52 and that the cost of administration (Contingent) amounted to \$33,594.09. The total expenditures plus the unpaid labor and purchases during the two-year period were \$1,479,232.20. The total amount expended for equipment was therefore approximately \$177,204.59, some of this amount representing the difference between the materials and supplies on hand at the beginning and the end of the biennium.

STANDARD DESIGNS: The standard designs for steel truss bridges, concrete girder bridges, concrete slab bridges and wood truss bridges, which were drawn up during the third biennium, have been used to a great extent and to great advantage during the past biennial period. By far the greatest number of bridges constructed have required special designs for the abutments only, the standard plans being used for the superstructures. Also, in many cases, standard state road bridge designs have been furnished to the counties and municipalities for use on roads other than state roads. These designs have not only saved hundreds of dollars worth of designing but have also saved a tremendous amount of valuable time due to the fact that they are always ready for use. The book of standard culvert plans which was compiled at the end of the second biennium has also proved to be a most valuable asset in the culvert construction work. Special designs for culverts are very rarely needed, as the standard designs seem to answer the requirements in nearly all cases. The essential features of the standard bridges and culverts are more fully described in the engineering section of the third biennial report.

SPECIAL DESIGNS: It is surprising to realize the number of special designs which are required incident to the construction of roads. Special designs are required for all bridges and culverts constructed at sites where the conditions are peculiar and not adaptable to the use of

ENGINEERING REPORT

standard designs. In addition to these we might say that practically all other structures used in the construction of roads, or as a part of the construction, require designs of a special nature. First we have designs of screening and crushing plants, of loading and unloading bins, traps and devices, also quarry plants, tool houses and construction shops, etc. Then, in addition to the many and varied designs of road profiles and section, we have also to design the various road accessories such as curbs, gutters, parks, trees, troughs, mile-posts, signs, warnings, fences, railings, retaining walls, banks, dykes, fords, special drains, etc. Individual mention of the special designs made during the past biennium will not be given in this section but most of the special structures constructed during this period will be mentioned or illustrated in the following county reports.

40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
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Miles of Concrete

Years Constructed

REPORT OF THE CLERICAL OFFICE OF THE STATE ROAD COMMISSION 1915 - 1916

ORGANIZATION: The Secretary of the State Road Commission is the head of the clerical office of the Commission. The office force consists of a Chief Clerk, Purchasing Clerk, two Bookkeepers, and three Stenographers. When the work is very excessive, additional clerks are employed temporarily.

DUTIES: The duties of the clerical department are to receive all correspondence and distribute to the proper departments for attention.

Check all time sheets, bills, etc., and write up pay rolls, and vouchers covering same, which after being certified to by the proper parties, are sent to the State Auditor's Office for payment.

Keep a record of all money due, received on account of, and paid from the State Road Funds.

Keep a record of the cost of construction of all roads, bridges, culverts, etc.

Call for bids on, and purchase all material, supplies and equipment of importance to be used by the State Agents in the different Counties.

Do the stenographic work for all departments of the State Road Commission, and file all records and correspondence.

Send the County Commissioners, triplicate copies of all pay rolls and vouchers, so that the County Officials may know how, and where, the State Road Funds of their respective Counties are being expended

ACCOUNTING SYSTEM: The method of accounting is patterned after the system used by the U. S. Reclamation Service; all blanks and forms having been gotten out by a traveling auditor of the U. S. Government. A full description

CLERICAL REPORT

of the Accounting System is given in the Third Biennial Report 1913-1914.

FUNDS: The total appropriation made by the State to the State Road Fund for the biennium 1915-1916 amounted to \$201,600.00, or \$100,800.00 per annum. This sum was divided equally among the twenty-eight Counties of the State.

This State Appropriation was to be used on the State Roads in each County, provided that the County Officials appropriate from their County Funds, an additional amount for the same purpose, said appropriation to be equal to the full amount of the State Appropriation for all Counties having an assessed valuation greater than \$4,000,000.00; one-half the amount to be appropriated by Counties having an assessed valuation of less than \$4,000,000.00, and greater than \$2,000,000.00; and one-fourth the amount to be appropriated by Counties having an assessed valuation of less than \$2,000,000.00. A further provision was made that in order for any County to participate in the State Road Fund, a special road tax must be levied. For amount of appropriations and tax levies made by the Counties, see statement of "Appropriations and Expenditures," given in the report of each County's work.

CLERICAL REPORT

**STATEMENT OF
APPROPRIATIONS AND EXPENDITURES.
OF
SPECIAL FUNDS.
1915-1916.**

CONTINGENT ACCOUNT.

RECEIPTS:

Funds transferred from State Appropriations for Counties, from December 1, 1914 to December 1, 1916	\$ 5,625.74	
Transferred from Motor Vehicle Fund from December 1, 1914 to December 1st, 1916.....	33,706.50	\$ 39,332.24

DISBURSEMENTS.

Disbursements from Dec. 1, 1914 to December 1, 1916.....		39,219.83
Balance on hand December 1, 1916...		<u>\$ 112.41</u>

CLERICAL REPORT

STATEMENT OF
 APPROPRIATIONS AND EXPENDITURES.
 OF
 SPECIAL FUNDS.
 1915-1916.

MOTOR VEHICLE FEE FUND.

RECEIPTS.

Collections made by the Secretary of State from October 1, 1914, to De- cember 1, 1916.....	\$129,703.15
---------------------------------------------------------------------------------------------------	--------------

DISBURSEMENTS.

*Appropriated, transferred and divided equally among the Counties from December 1, 1914, to December 1, 1916, to be credited to Counties when required County Appropria- tion made by them.....	\$80,400.00	
Transferred to the Contingent Fund of the State Road Commission from December 1, 1914, to Decem- ber 1, 1916.....	33,706.50	
Used to pay expenditures of Secre- tary of State's Office Account Auto Plates, etc., from December 1, 1914, to December 1, 1916.....	10,314.64	\$124,421.14
Balance December 1, 1916.....		\$ 5,282.01

NOTE. Of the amount transferred from the Motor Vehicle Fee Fund for use of Counties, namely \$80,400.00, only \$54,800.00 credited to Counties to December 1, 1916, the balance \$25,600.00 being held waiting notice of County Appropriations. See note in Appropriation Ledger.

CLERICAL REPORT

STATEMENT OF
APPROPRIATIONS AND EXPENDITURES.
OF
SPECIAL FUNDS.

1915-1916.

EQUIPMENT FUND.

RECEIPTS.

Balance on hand December 1, 1914..... \$ 9,801.24

DISBURSEMENTS.

Expenditures from December 1, 1914, to December 1, 1916.. 9,483.65

Gross balance December 1, 1916..... \$ 317.59

STATEMENT OF
APPROPRIATIONS AND EXPENDITURES.
OF
SPECIAL FUNDS.

1915-1916.

MIDLAND TRAIL.

RECEIPTS.

Balance on hand December 1, 1914.. \$ 1,433.20

December 1, 1914, to December 1,
1916, Refunds to Midland Trail

Account 883.49 \$ 2,316.69

DISBURSEMENTS.

Expenditures from December 1, 1914,
to December 1, 1916..... \$ 964.80

Balance December 1, 1916..... \$ 1,351.89

CLERICAL REPORT

STATEMENT OF APPROPRIATIONS AND EXPENDITURES. OF SPECIAL FUNDS. 1915-1916.

PIONEER ROADS.

RECEIPTS.

Balance on hand December 1, 1914....	\$ 5,000.00
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DISBURSEMENTS.

Expenditures from December 1, 1914 to December 1, 1916.....	None
Balance on hand December 1, 1916...	<u>\$ 5,000.00</u>

CLERICAL REPORT

STATE ROAD COMMISSION.
1913-1916.

COUNTY	Balance State Appropriation and Fee Fund Dec 1, 1916	Balance County Appropriation and Fee Fund Dec 1, 1916	State Appropriation along with Motor Vehicle Fee Fund 1913-1916	County Appropriation 1913-1916	County and City Appropriations from Motor Vehicle Fee Fund and 1916	Total	Expenditures	Unpaid Labor and Purchase	Balance
Beaver	\$ 2,144.31	\$ 6,626.28	\$ 11,183.21	\$ 5,532.14		\$ 28,791.82	\$ 23,553.61	\$ 3,461.62	\$ 2,976.66
Box Elder	None	7,863.57	9,583.21	11,964.29		57,136.29	60,734.88	12,112.86	Def. 5,711.45
Cascade	359.68	17,883.53	9,583.21	9,464.29		72,173.61	66,630.77	18,558.20	Def. 11,013.46
Carbon	312.28	6,306.24	11,183.21	11,064.29		56,691.84	41,616.22	2,614.37	12,261.26
Davis	1,107.34	32,114.08	9,583.21	9,464.29		98,012.07	81,533.98	19,897.48	Def. 8,419.39
Duchenne	None	None	11,158.16	2,766.07		22,063.40	16,794.96	2,662.31	3,176.13
Emery	151.64	9,418.14	9,583.21	4,732.14		40,338.85	29,778.30	6,594.06	4,026.49
Garfield	374.28	4,176.51	11,183.21	2,766.07		22,059.25	14,264.33	6,448.97	1,345.95
Grand	1,159.01	11,240.06	9,583.21	2,366.07		26,736.52	22,581.62	3,409.92	803.98
Iron	2,176.54	12,465.57	9,583.21	4,732.14		34,262.35	26,763.13	4,337.83	3,171.89
Juab	122.04	4,493.83	11,183.21	11,164.29		37,220.87	23,674.20	2,543.38	11,003.29
Kane	4,123.99	8,210.53	11,183.21	2,766.07		29,618.56	17,356.58	1,909.22	10,352.76
Millard	1,081.80	7,335.07	9,583.21	4,732.14		39,165.90	27,094.26	5,068.66	6,962.98
Morgan	346.51	9,205.30	9,583.21	2,366.07		26,364.13	19,842.93	8,228.74	292.46
Plute	4,973.94	5,812.16	9,583.21	2,366.07		26,168.31	18,975.20	1,176.47	5,016.64
Rich	273.84	2,046.17	11,183.21	2,766.07		20,237.64	17,192.38	5,703.33	2,689.07
Salt Lake	368.45	18,891.94	9,583.21	11,198.68		271,765.52	258,264.28	78,883.56	Def. 63,382.32
San Juan	4,942.97	11,823.43	9,583.21	2,366.07		38,796.91	33,169.57	4,332.81	3,706.47
Sanpete	463.17	5,080.91	9,583.21	9,464.29		42,755.58	31,359.26	9,794.00	1,678.32
Sevier	346.92	16,273.59	11,183.21	5,532.14		51,402.50	42,485.56	13,085.27	4,169.33
Summit	345.16	17,965.26	9,583.21	9,464.29		57,720.66	57,113.90	9,449.22	1,157.51
Tooele and Wendover Imp.	1,124.82	5,168.63	11,183.21	9,464.28		50,251.58	41,917.77	2,811.94	5,521.87
Uintah	368.31	8,218.31	9,583.21	4,732.14		31,677.06	16,068.53	5,242.64	10,365.91
Utah	77.23	1,160.95	11,183.21	11,064.28		74,343.76	66,435.46	5,743.13	2,165.16
Wasatch	198.96	2,147.44	11,183.19	5,532.14		24,742.34	15,339.50	4,406.79	4,996.05
Washington	248.09	2,021.34	11,183.19	2,366.07		18,196.07	13,955.57	1,388.19	2,852.31
Wayne	3,709.84	5,362.45	9,583.19	2,366.07		23,032.05	14,189.70	3,177.34	5,865.01
Weber	828.20	9,032.26	9,583.19	9,464.27		76,772.15	73,388.63	26,860.60	Def. 22,975.08
Midland Trail									
Box Elder	31.23					704.12	69.62		634.50
Carbox	918.83					921.64	885.18		26.46
Grand	485.14					680.93	None		680.93
Equipment Fund	9,801.24					9,801.24	9,483.65		317.59
Pioneer Roads	5,000.00					5,000.00	None		5,000.00
Contingent Fund						al. 33,706.50	†Bal. 33,594.09		112.41
Motor Vehicle Fee Fund			†Bal. 33,706.50						
Totals	\$ 47,919.96	\$ 247,773.54	\$ 362,408.90	\$ 174,027.21	\$ 558,467.57	\$ 1,490,597.18	\$ 1,215,719.29	\$ 263,512.91	\$ 11,364.96

*These Counties also had balances in the Midland Trail Fund, statement of which is made under Midland Trail in above list.
†Total transferred to Contingent Fund \$39,332.24. Total expenditures from Contingent Fund \$39,219.83 (see detailed statement of Contingent account), but as \$5,625.74 of these amounts transferred from, and included in County statements of appropriations and expenditures only balances \$33,706.50 and \$33,594.09 included in Summary Statement.

†Total Motor Vehicle Fee collections \$129,703.15; Total disbursements \$124,421.14 (see detailed statement of Motor Vehicle Fee Fund), but as \$54,800.00 of these collections credited to Counties, and \$33,706.50 transferred to Contingent Fund, and included in County and Contingent Fund statements, only balance of \$41,196.65 included in Summary Statement. Of the total disbursements \$124,421.14, \$54,800.00 transferred to Counties, \$33,706.50 transferred to Contingent Fund and \$25,800.00 held for certain counties, leaving expenditure balance \$10,314.64. The balance in the Summary Statement is shown as \$30,882.01, only \$5,232.01 available as \$25,800.00 reserved waiting appropriation notices from certain counties, as per notation in Appropriation Ledger.

BEAVER COUNTY.

At the beginning of the biennium there was the net sum of \$5,514.18 remaining in the State Road Fund available for use in Beaver County. During the biennium the State appropriated \$11,064.29, the County appropriated \$5,532.14, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$4,305.98 by special Road Tax Levy, making a total of \$26,535.51, which has been available for road construction. From this sum \$23,558.82* has been expended, leaving a net balance of \$2,976.69 on hand.

In 1915 the greatest piece of road construction work accomplished was that of grading about 13 miles of road from a point about 12 miles north of Beaver, northwardly to the Millard County line. This road was constructed at an average cost of \$373.79 per mile. A stretch of two miles was also graded just west of Frisco in November, 1916.

Some gravel surfacing was accomplished in 1915 on the road between Beaver and Minersville, consisting of about two-thirds of a mile between Beaver and Greenville, about one-third of a mile between Greenville and Adamsville, and about one mile of the road just south of Adamsville.

In 1916 the road from Beaver south to the Iron County line was graded. This work extended over a distance of nine miles and was constructed mostly through uneven country, at an average cost of \$485.00 per mile.

The road from Milford, via Frisco to Newhouse was designated as a State Road on November 10th, 1916.

Two important bridges were constructed in Beaver County during the past biennium. In the south part of the City of Beaver the old wood bridge over the Beaver River was depreciating rapidly and required continual repair. The old structure has been replaced with a 30-foot span concrete girder

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	\$23,353.61
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	\$ 3,256.41
	<u>\$20,097.20</u>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	\$ 3,461.62
<i>Total Expenditures during the Fourth Biennium.....</i>	\$23,558.82

BEAVER COUNTY

bridge. The new bridge was constructed in accordance with the standard bridge designs of the State Road Commission, and it has a clear width of roadway of sixteen feet. It is a permanent structure constructed on graceful lines and possesses a very substantial appearance. The bridge was constructed during the fall of 1915, and the spring of 1916.

Just north of the town of Minersville the State Road crossed the Beaver river over an old log stringer bridge constructed on log-crib abutments and piers. The old structure was declining fast. The main timbers were insufficient for the traffic, and the flooring was rotting away. A concrete-girder structure similar to the one constructed at Beaver was built to replace the bridge mentioned. The new bridge is 35 feet in span and has a clear roadway sixteen feet wide. It is also a standard type of the new State Road bridge designs. This bridge was constructed at the same time and under the supervision of the same engineer as for the Beaver bridge. It is the greatest span concrete-girder bridge constructed to date by the State Road Commission.

Sixty-two culverts were constructed on the Beaver County State roads during the past biennium, twenty-seven in 1915, and thirty-five in 1916. Fifty-three were constructed of corrugated iron pipe and nine were constructed of reinforced concrete. The standard culvert designs furnished by the State Road Commission were used on all culverts.

Considerable road maintenance work was accomplished in Beaver County during the past biennium, including repairing, dragging and other miscellaneous maintenance of roads, bridges and culverts, also temporary bridge work, removal of old bridges, bridge and culvert repair, retaining walls and fences, etc., as will be noted in the accompanying tables.

BEAVER COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
BEAVER COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 2,144.31	
1915-1916 State Appropriations.....	11,064.29	
Motor Vehicle Fee Fund.....	118.92	\$13,327.52

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$ 1,824.55		
1915-1916 County Appropriations....	5,532.14		
Balance Road Tax on Hand Dec. 1,			
1914	4,801.73		
1915 State Road Tax Collections Date			
of Levy to Dec. 31, 1915.....	1,225.57		
1916 State Road Tax Collections Date			
of Levy to Dec. 1, 1916.....	2,000.00		
Additional Collections 1911 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	24.72		
Additional Collections 1912 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	23.70		
Additional Collections 1913 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	35.90		
Additional Collections 1914 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	916.07		
Additional Collections 1915 State			
Road Tax Dec. 31, 1915, to Nov. 30,			
1916	80.02	16,464.40	\$29,791.92

DISBURSEMENTS.

State Appropriation Fund.....	\$11,340.08	
County Appropriation Fund.....	3,971.24	
Special State Road Tax Levy.....	7,923.37	
Motor Vehicle Fee Fund.....	118.92	\$23,353.61
Gross Balance Dec. 1, 1916.....		\$ 6,438.31
Less Unpaid Labor and Purchases...		3,461.62
Net Balance Dec. 1, 1916.....		\$ 2,976.69

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$2,767,258.00	1/2	....	\$1,383.62
1916	6,478,203.00	1/2	....	3,239.10

BEAVER COUNTY

BEAVER COUNTY—ROAD CONSTRUCTION, 1915.												
PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
ADAMSVILLE	7.0	30	0.26	\$ 2.74	\$ 10.54	30	Gravel	14	8	2.30	\$ 903.88	\$ 354.46
BEAVER	36.0	12 24 30	1.66 7.90 2.80	4,620.01	373.79	30	Gravel	10	8	0.59	180.15	320.59
GREENVILLE	3.0					30	Gravel	10	8	0.15	62.25	415.00
MILFORD	5.0											
MINERSVILLE	15.0					30	Gravel	14	8	0.22	368.50	1,675.00
TOTAL	66.0		12.62	\$ 4,622.75	\$ 366.30					3.51	\$ 1,514.78	\$ 431.56

BEAVER COUNTY

1
|
2

BEAVER COUNTY

BEAVER COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
BEAVER-IRON	Beaver	Concrete Girder	Concrete	30	16	70%	\$1,744.61	Cor. Iron	7	18"	28		
								Cor. Iron	7	24"	30		
								Concrete	2	4'x2'	24		
								Concrete	2	4'x4'	24		
								Concrete	1	5'x4'	24	\$ 1,922.71	\$101.95
BEAVER-MILLARD								Cor. Iron	2	10"	20		
								Cor. Iron	5	16"	20		
								Cor. Iron	4	18"	25		
								Cor. Iron	1	24"	32		
								Concrete	4	4'x1'-2"	24	1,082.36	67.65
BEAVER-MILFORD	Minersville	Concrete Girder	Concrete	35	16	55%	1,985.38						
TOTAL							\$3,729.99		35			\$ 3,005.07	\$ 85.86

BEAVER COUNTY

(Beaver No. 14.) Reinforced Concrete Girder Bridge at Beaver, Showing Forms in Place. Span 30 ft.



(Beaver No. 16.) Reinforced Concrete Girder Bridge at Minersville before Removing Underpinning. Span 35 ft.

'D' GIRDER
= 1'

NOTES

Abutments to go down to good foundation.
Concrete to abutments 1.5 ft min.
Concrete to slab, girders and railings
1.5 ft min.
Center line of bridge to be 42 ft from
north end and 38 ft from south
end of old bridge.
B.M. Elev. 100 - Stake on side of tele-
phone pole N.W. of bridge site
See Field Book #30 p. 35 for survey
of bridge site.
Girders shall have a camber of $2\frac{1}{2}$ "
Serial Number 5880
Designing Loads:-
Dead Load = 8600 lbs./lin. ft.
Controlled L.L. = 18 lbs./sq. ft. road roller.
Uniform Live Load = 100 lbs./sq. ft.
Impact = 25% Max Live Load



UTAH STATE ROAD COMMISSION	
MINERSVILLE BRIDGE	
35 FT. CONCRETE GIRDER	
MINERSVILLE PRECINCT BEAVER CO.	
E. R. Morgan, State Road Engineer Salt Lake City, Utah	
Designed by E. R. Morgan	Scale As Shown
Drawn by J. H. Smith	Issued Oct. 18, 1915
Checked by J. H. Smith	From Salt Lake Office
D-61	

THE NEW YORK
PUBLIC LIBRARY
ASTOR, LENOX
TILDEN FOUNDATIONS

BOX ELDER COUNTY

At the beginning of the biennium there was the net sum of \$3,161.84 remaining in the State Road Fund available for use in Box Elder County. There was also a refund of \$672.89 to the Midland Trail Fund. During the biennium the State appropriated \$9,464.29, the County appropriated \$11,964.29, the Motor Vehicle Fee Fund amounted to \$118.92, and the City of Tremonton raised \$1,250.00 by taxes and appropriation, and the County raised \$26,475.22 by Special Road Tax Levy, making a total of \$52,434.56, which has been available for road construction. From this sum \$57,511.51* has been expended, leaving a deficit of \$5,076.95.

The roads surfaced in Box Elder County during the biennium are as follows; one and one-half miles just north of Brigham surfaced with gravel in June, 1916, two and one-half miles between Brigham and Mantua surfaced with gravel in September, 1916, one-half mile north of Mantua surfaced with gravel in June, 1916, three-quarters of a mile south of Brigham surfaced with gravel in April, 1916, one-half mile at Deweyville surfaced with gravel in June, 1916, one and one-half miles at Corinne surfaced with shale at different times during the biennium, one and one-third miles surfaced with gravel between Brigham and Collinston in May of 1916, one mile in Bear River City surfaced with gravel in March and April of 1916, three-quarters of a mile between Brigham and Tremonton surfaced with gravel in May of 1916, one mile just north of Bear River City surfaced with gravel in June of 1915, two miles between Bear River City and Tremonton surfaced with gravel in June, 1915 and May, 1916, one and one-half miles between Plymouth and Washakie surfaced with gravel in November, 1916, one-half mile at Snowville surfaced with gravel in July, 1916, and one mile south of Willard surfaced with bituminous macadam in July and August, 1915.

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$50,804.50</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 5,405.85</i>
	<i>\$45,398.65</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$12,112.86</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$57,511.51</i>

BOX ELDER COUNTY

In September, October and November of 1916, a concrete road was constructed on the highway running northwardly from Hot Springs which is located at the Weber-Box Elder line. Only very light grading was necessary for this work. The preliminary grading, the sub-grading and the concrete slab construction were let by contract to the Gilkerson Construction Co. The work was pursued under the inspection of an engineer from the State Road Commission. During the period above mentioned a stretch of 5,305 linear feet was constructed.

The roadway consists of a single strip of concrete 16 ft. wide, 6 inches thick and having a flat surface which dips transversely to a drop of 4 inches in 16 ft. This drainage slope is made to the west, or in the direction of the general slope of the country. A $1:1\frac{3}{4}:4\frac{1}{2}$ mix was used. The shoulders will be constructed of the old macadam to a width of four feet on each side of the concrete strip.

The grading work accomplished during the biennium consists of the following; two stretches of one mile each in the vicinity of Washakie graded in July, 1915, one-half mile between Brigham City and Collinston in May, 1916, three miles between Garland and Point Lookout in May, 1916, one mile just west of Garland in August, 1916, three miles at Point Lookout in April, 1916, three miles just east of Blue Spring in May, 1916, four miles between Blue Spring and Blind Spring in October, 1916, one-half mile at the Cache County line east of Collinston in November, 1916, and one mile just north of Mantua in June, 1916, also other miscellaneous smaller stretches.

The State Road designations made by the Commission during the past biennium are as follows: The road locally known as the south road through Corrine City was designated June 1st, 1915. The road extending eastwardly from Garland, via Collinston, to the Cache County line, and the road extending from Collinston south to Brigham City, were designated as State Roads on January 10th, 1916.

Two wood-stringer bridges, each having a span of twelve feet and a sixteen-foot width of Roadway, were constructed over Dove Creek and Muddy Creek in 1915. A reinforced

BOX ELDER COUNTY

concrete-slab bridge was constructed over the Elwood-Bear River Canal on the Brigham-Tremonton Road in 1916. This bridge has a span of twenty feet and a clear width of roadway of sixteen feet. The accompanying construction tables give the cost data for these bridges.

Forty-four culverts were constructed during the biennium. In 1915, twenty-one corrugated iron culverts were constructed on the State Road in Lake Precinct, and one concrete pipe culvert in Malad Precinct. In 1916, two large concrete box culverts were constructed on the Brigham-Tremonton road, and twenty concrete pipe culverts were constructed throughout the county.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work was accomplished in Box Elder County during the past biennium, as will be noted in the accompanying tables.

BOX ELDER COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS IN

BOX ELDER COUNTY.

1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$	None
1915-1916 State Appropriations.....		9,464.29
Motor Vehicle Fee Fund.....		118.92
Balance Midland Trail Fund on Hand		
Dec. 1, 1916.....		31.23
Refunds to Midland Trail Fund		
Account Graders Sold, Etc.....	672.89	\$10,287.33

County Appropriations and Tax Levies:

Balance County Appropriation on		
Hand Dec. 1, 1914.....	\$	None
1915-1916 County Appropriations.....		11,964.29
Balance Road Tax on Hand Dec. 1,		
1914.....		7,863.57
1915 State Road Tax Collections Date		
of Levy to March 1, 1916.....		12,147.46
1916 State Road Tax Collections Date		
of Levy to Nov. 30, 1916.....		9,601.35
Additional Collections 1910 State		
Road Tax Dec. 1, 1914, to Dec. 1,		
1916.....		8.89
Additional Collections 1911 State		
Road Tax Dec. 1, 1914, to Dec. 1,		
1916.....		67.94
Additional Collections 1912 State		
Road Tax Dec. 1, 1914, to Dec. 1,		
1916.....		42.86
Additional Collections 1913 State		
Road Tax Dec. 1, 1914, to Dec. 1,		
1916.....		833.83
Additional Collections 1914 State		
Road Tax Dec. 1, 1914, to Dec. 1,		
1916.....		3,728.69
Additional Collections 1915 State		
Road Tax March 1, 1916, to Dec. 1,		
1916.....		44.16
Plus Error in Original Report of		
1910 Tax Collections.....	04	\$46,303.08

Tremonton City:

1915 Tax Levy Remitted to Dec. 1,		
1916.....	\$	410.04
1916 City Appropriation.....		39.96
Collection Remitted to Dec. 1, 1916,		
From Property Owners Abutting		

Tremonton Storm Sewer.....	800.00	1,250.00	\$57,840.41
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BOX ELDER COUNTY

DISBURSEMENTS.

State Appropriation Fund.....	\$ 9,094.41	
Midland Trail Fund.....	69.62	
County Appropriation Fund.....	11,944.33	
Special State Road Tax Levy.....	28,327.22	
Tremonton City	1,250.00	
Motor Vehicle Fee Fund.....	118.92	\$50,804.50
		<hr/>
Gross Balance Dec. 1, 1916.....		\$ 7,035.91
Less Unpaid Labor and Purchases...		12,112.86
		<hr/>
*Deficit December 1, 1916.....		\$ 5,076.95

STATEMENT OF ROAD TAX LEVIES.

	Year	Taxable Valuation	Mills	Loss in Fractions	Levy
County	1915	\$12,429,208.00	1	0.89	\$12,428.31
County	1916	28,947,649.00	1	0.18	28,947.46
Tremonton City ...	1915	205,021.00	2	....	410.04

**Deficit covered by 1916 Tax Collections not reported prior to Dec. 1, 1916.*

BOX ELDER COUNTY

BOX ELDER COUNTY—ROAD CONSTRUCTION, 1915.													
PRECINCT	Miles of State Road Designated	ROAD GRADED			ROAD SURFACED								
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile	
BEAR RIVER	2.0					32	Gravel	12	10	0.95	\$ 1,415.52	\$ 1,490.02	
BOX ELDER	11.0												
CLEAR CREEK	3.0												
ELWOOD	6.0					32	Gravel	12	10	1.33	1,126.73	847.16	
FIELDING	2.0												
GARLAND	3.5												
GROUSE CREEK	7.0												
LAKE	126.0	20	1.5	\$ 453.24	\$ 302.16								
MALAD	6.0					24	Shale	10	7	0.82	1,168.60	1,425.12	
MANTUA	5.0												
MANILA	3.0	55	0.26	82.50	317.31	55	Shale	16	9	0.26	747.90	2,874.23	
PERRY	2.5												
PLYMOUTH	4.2												
PORTAGE	7.8	20	2.14	915.50	427.80								
RAWLINS	13.0	20	2.50	2,122.36	848.94								
RIVERSIDE	2.5												
WILLARD	7.8					14	Bituminous Macadam	12	3	0.95	3,613.43	3,903.61	
TOTAL	212.3		6.40	\$ 3,573.60	\$ 558.38					4.31	\$ 8,071.58	\$ 1,872.76	

BOX ELDER COUNTY



BOX ELDER COUNTY

BOX ELDER COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
ELWOOD	Elwood Bear River Canal	Concrete Slab	Concrete	20	16	All	\$1,287.80						
LAKE	Dove Creek	Wood Stringer	Concrete	12	16	All	402.53	Cor. Iron	14	12"	19	\$ 277.77	\$ 13.23
								Cor. Iron	5	15"	19		
								Cor. Iron	2	21"	20		
MALAD								Con. Pipe	1	15"	20	57.87	57.87
PLYMOUTH	Malad River	Steel Truss	Concrete	50	16	Super-structure	207.34						
TOTAL							\$3,120.01		22			\$ 335.64	\$ 15.26

BOX ELDER COUNTY

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BOX ELDER COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.													
ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
BRIGHAM-TREMONTON	Elwood Bear River Canal.....	Concrete Slab	Concrete	20	16	Delivery Material	\$ 47.98	Con. Pipe	1	15"	34		
								Con. Pipe	2	12"	24		
								Concrete	2	6'x3'	24	\$ 588.55	\$117.71
BRIGHAM-WEBER								Con. Pipe	1	8"	18		
								Con. Pipe	1	12"	15		
								Con. Pipe	2	15"	27	187.19	31.20
								Con. Pipe	2	18"	28		
GARLAND-CACHE								Con. Pipe	1	18"	25	19.75	19.75
TREMONTON-NEVADA								Con. Pipe	10	12"	20	17.50	1.75
TOTAL							\$ 47.98		22			\$ 812.99	\$ 36.96

BOX ELDER COUNTY

**(Box Elder No. 28.) Standard Steel Bridge with Concrete Floor over
Malad River near Plymouth. Span 50 ft.**

**(Box Elder No. 29.) Reinforced Concrete Slab Bridge over Bear River
Canal South of Plymouth. Span 30 ft.**

BOX ELDER COUNTY

20



BOX ELDER COUNTY

**(Box Elder No. 62) Reinforced Concrete Slab Bridge on the State
Road at Tremonton.**

**(Box Elder No. 78.) Construction of Concrete Road South of Willard, Showing
Use of Roller for Tamping and Striking.**

BOX ELDER COUNTY

**(Box Elder No. 79.) Lowering 18-inch Concrete Pipe
into Place for Tremonton Storm Sewer.**

11-11-11

THE NEW
PUBLIC LIBRARY
ASTOR LENOX
TILDEN FOUNDATIONS

CACHE COUNTY

At the beginning of the biennium there was the net sum of \$12,469.84 remaining in the State Road Fund available for use in Cache County. During the biennium the State appropriated \$9,464.29, the County appropriated \$9,464.29, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$34,883.80 by special Road Tax Levy, making a total of \$66,401.14, which has been available for road construction. From this sum \$77,416.60* has been expended, leaving a deficit of \$11,015.46.

At Wellsville a stretch of road one and one-half miles in length was surfaced with gravel in December, 1915. At Millville a stretch one mile in length was surfaced with gravel in November, 1916. At College a stretch of road nearly two miles in length was surfaced with gravel in September and October of 1916. Surfacing with gravel was also pursued as follows during the biennium; about one mile in the town of Paradise, one-half mile near Avon, two-thirds of a mile just north of Smithfield, one-half mile just south of Richmond, one mile just north of Cove, and one mile on the road from Richmond to Lewiston.

Road grading work was accomplished to a greater extent during the past biennium than at any other time in the history of the County. The greatest part of this work was done in the spring and summer of 1916. A 75 H. P. C. L. Best tracklayer tractor was used to draw the graders over many miles of the road. The grading work was completed over the following stretches of road; from Cove north to the Idaho line, from Richmond to Lewiston, from Lewiston to Cornish, and from Cornish to Newton, also from Charleston via Newton, Cache Junction and Mendon to Wellsville. Another stretch extends from a point about three miles west of Logan, westwardly for about five miles. Other stretches are located at Hyrum and Paradise and from Paradise southeasterly

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$66,630.77</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 5,772.37</i>
	<i>\$60,858.40</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$16,558.20</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$77,416.60</i>

CACHE COUNTY

toward the Weber County line, also a number of stretches in Logan Canyon aggregating about five miles. A total of approximately sixty miles of grading was accomplished during the biennium.

In 1916 the city of Logan, in conjunction with the State Road Commisison, and the O., L. & I. Railroad Co., constructed a concrete pavement with curbs and gutters along Main Street between First South and Sixth South Streets of said city. The State's portion consisted of two strips each fourteen feet in width lying adjacent to the railway right of way, which extends in most part along the center of the street. The preliminary and general engineering and the supervision were handled by the City Engineer of Logan, while the engineering inspection was handled conjointly by the City Engineer and the State Road Commission. The construction work was let to a local contractor.

The following designations of State Roads were made during the biennium: The road from Richmond via Lewiston to Cornish, and from Cornish south via Newton to Cache Junction was designated on August 10, 1915. The road from Petersboro via Mendon to Wellsville, and the road south from the forks south of Logan, via Hyrum and Paradise to Avon, were also designated as State Roads on August 10, 1915. The road from Avon south to the Weber County line was desiganted on August 17th, 1916.

In 1915 a bridge was constructed for the State Road to cross over the Ogden, Logan and Idaho Railroad at a point near the summit between Collinston and Petersboro. This bridge was built by the Railroad Company and was partly paid for by the State Road Commission. The structure is an eighty-foot span steel pony-truss bridge constructed on concrete abutments. There is a clearance of twenty-three feet between the tops of the rails and the lower edges of the floor-beams. The sum of \$1,500.00 was allowed by the State Road Commission toward the construction of this bridge. The structure was not constructed from the standard designs of the State Road Commission, but was built to the plans furnished by the steel contractors. In 1916, an 18-foot span log-stringer bridge was constructed over the Logan City pipe

CACHE COUNTY

line, and a 20-foot span concrete slab bridge was constructed over Newton Creek, just east of Newton.

Seventy-seven culverts were constructed on the State Roads in Cache County during the past biennium, of which fifty-three were built in 1915 and twenty-four in 1916. Fifty-two of the culverts mentioned are corrugated iron, twelve are of reinforced concrete, six are of cast iron pipe, and seven are of wood.

Considerable maintenance and repair of roads, bridges and culverts and the construction of some special structures such as retaining walls, railings and screening plants, etc., are to be included in the accomplishments of the past biennium. A tabulation of these items and their costs will be found in the accompanying table.

The U. S. Forest Service also carried on some maintenance work in Logan Canyon on the Logan-Rich road. This work was done in 1916 and amounted to \$509.40 for road maintenance and \$280.25 for the renewal of a guard rail fence.

CACHE COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
CACHE COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand Dec. 1, 1914.....	\$ 315.14	
1915-1916 State Appropriations.....	9,464.29	
Motor Vehicle Fee Fund.....	118.92	
Balance State Bond on Hand Dec. 1, 1914	44.54	\$ 9,942.89

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ †	
1915-1916 County Appropriations....	9,464.29	
Balance Road Tax on Hand Dec. 1, 1914	17,882.53	
1915 State Road Tax Collections Date of Levy to Feb. 1, 1916.....	25,374.34	
1916 State Road Tax Collections Date of Levy to Feb. 1, 1916.....		
Additional Collections, 1910 State Road Tax Dec. 31, 1910, to Dec. 1, 1916.	4.00	
Additional Collections 1911 State Road Tax, Dec. 31, 1912, to Dec. 1, 1916	7.03	
Additional Collections 1912 State Road Tax, Dec. 31, 1912, to Dec. 1, 1916	21.45	
Additional Collections 1913 State Road Tax, July 1, 1914, to Dec. 1, 1916	38.34	
Additional Collections 1914 State Road Tax Jan. 4, 1915, to Dec. 1, 1916	145.21	
Additional Collections 1915 State Road Tax Feb. 1, 1916, to Dec. 1, 1916	3,293.43	
1916 State Road Tax Levy Received from Date of Levy to Nov. 29, 1916	6,000.00	62,230.62 \$72,173.51

†A disbursement of \$43.80 was made subsequent to the closing of the Third Biennium books leaving no balance. An apparent difference of \$43.80 will therefore exist between the balances indicated in the two reports.

CACHE COUNTY

DISBURSEMENTS.

State Appropriation Fund.....	\$ 9,665.44	
State Bond Fund.....	24.00	
County Appropriation Fund.....	9,274.50	
Special State Road Tax Levy.....	47,547.91	
Motor Vehicle Fee Fund.....	118.92	\$66,630.77
		<hr/>
Gross Balance Dec. 1, 1916.....		\$ 5,542.74
Less Unpaid Labor and Purchases...		16,558.20
		<hr/>
*Deficit Dec. 1, 1916.....		\$11,015.46

STATEMENT OF ROAD TAX LEVIES.

	Year	Taxable Valuation	Mills	Loss in Fractions	Levy
County	1915	\$10,635,003.00	2½	3.62	\$26,583.88
County	1916	25,676,338.00	1	2.57	25,673.76
Logan City	1916	6,108,355.00	1	....	6,108.35

**Deficit to be covered by 1916 tax collections, not remitted prior to Dec. 1, 1916.*

CACHE COUNTY



1870

1871

1872

1873

CACHE COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	ROAD GRADED			ROAD SURFACED								
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
AVON-WEBER	9.0	16	7.09	\$ 4,560.46	\$ 643.22							
LEWISTON-CORNISH	5.2	30	5.04	2,108.51	418.85							
LOGAN CITY	4.0							67	7	0.63	\$14,852.24	\$23,575.00
LOGAN-PETERSBORO	6.7											
LOGAN-RICH	27.8	30	15.00	2,679.99	536.00							
LOGAN-SMITHFIELD	4.8											
LOGAN-WELLSVILLE	9.25	*	*	71.00				16	10	1.71	2,300.33	1,345.22
NEWTON-CLARKSTON	5.0	30	5.25	274.37	52.26							
NEWTON-IDAHO	13.0	30	13.31	2,079.68	156.25							
PETERSBORO-BOX ELDER	2.6											
PROVIDENCE-AVON	15.0	16	2.00		148.21			16	8	1.85	2,550.89	1,378.85
		30	4.50	963.34				14	9	0.88	1,305.31	1,471.94
RICHMOND-IDAHO	5.5							16	9	1.55	3,631.76	2,348.08
RICHMOND-LEWISTON	4.5	30	4.00	1,906.14	476.53							
SMITHFIELD-RICHMOND	6.0											
WELLSVILLE-BRIGHAM	8.6	30	0.23	451.89	1,964.74			14	16	0.43	1,660.94	3,862.65
WELLSVILLE-NEWTON	16.4	30	15.00	1,085.35	73.02							
TOTAL	143.35		61.42	\$16,190.73	\$ 263.61					7.05	\$26,301.47	\$ 3,780.69

*Mileage not reported.
†About 5.0 miles.

*State's portion only, amounting to two 14-ft. strips entire length.

CACHE COUNTY

CACHE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.

PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
COVE								Cor. Iron	2	12"	33		
BENSON	O. L. & I.	Steel	Concrete	80			\$1,500.00	Cor. Iron	4	18"	26	\$ 211.74	\$ 35.29
HYRUM								Cor. Iron	1	30"	30	144.09	144.09
LOGAN								Cor. Iron	4	12"	25		
								Cor. Iron	2	18"	33	178.38	29.78
NEWTON								Concrete	1	4'x8'	26	318.32	318.32
PARADISE								Cor. Iron	1	10"	30		
								Cor. Iron	3	12"	31		
								Cor. Iron	1	15"	40	156.27	31.25
PROVIDENCE								Cor. Iron	1	12"	30	30.10	30.10
								Con. Pipe	1	12"	16		
								Concrete	1	3½'x5'	10	142.54	71.27
RICHMOND								Cor. Iron	1	12"	28		
								Cor. Iron	1	18"	28		
								Concrete	1	2'x2'	6		
								Concrete	1	4¾'x8'	28		
								Stone-wood	5	2'x1'	16		
								Stone-wood	1	3'x1'	16	579.23	57.92
SMITHFIELD								Cor. Iron	5	12"	23		
								Iron Pipe	3	6"	12		
								Iron Pipe	2	7"	12		
								Iron Pipe	1	8"	12		
TRENTON								Concrete	1	2'x1'	36	176.79	14.73
								Cor. Iron	1	18"	28	32.45	32.45

*State's portion.

CACHE COUNTY

CACHE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.—Continued.

PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
WELLSVILLE								Cor. Iron	1	10"	12		
								Cor. Iron	1	12"	12		
								Cor. Iron	5	15"	30	425.91	53.24
								Concrete	1	6'x4'	20		
TOTAL							\$1,500.00		53			\$ 2,395.82	\$ 45.20

CACHE COUNTY

CACHE COUNTY

**(Cache No. 2.) Concrete Street Pavement in Logan City, Showing
Parking in Center.**

(Cache No. 3.) Concrete Street Pavement on Main Street, Logan City.

CACHE COUNTY

(Cache No. 29.) Breaking New Dugway with Graders, drawn by Caterpillar Tractor, between Newton and Cornish.

(Cache No. 31.) Grading Gumbo Road between Mendon and Cache Junction by means of Caterpillar Tractor and Graders.



BILL OF MATERIAL.

Materials-

Total Volume	68.2 cu. yds.
Concrete	90.5 cu. yds.
Gravel	37.0 cu. yds.
Gravel	35.6 . .

Reinforcing Steel-

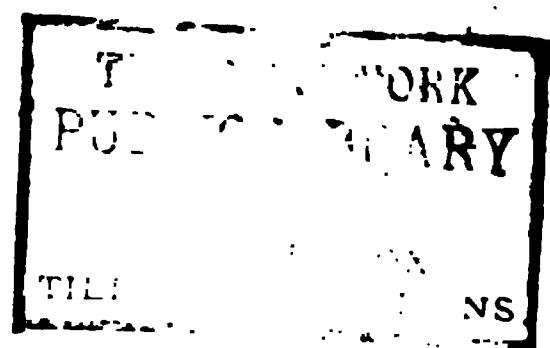
15-#4 rods	15'-0" long.	179.1 lbs.
60-#4 . .	10'-0" . .	2,272 . .
Total		2,451 . .

NOTE:

Concrete in slab & railing	1:2:4 mix.
Concrete - abutments	1:3:5 . .
Serial NO. 9640.	

UTAH STATE ROAD COMMISSION	
WEST CACHE CANAL BRIDGE.	
NEWTON-IDAHO ROAD CACHE COUNTY	
E. R. Morgan, Chief Engineer	
Designed by - J. E. Morgan	Check - J. E. Morgan
Drawn by - J. E. Morgan	Revised - J. E. Morgan
Checked by - J. E. Morgan	From - J. E. Morgan
D-75	

A-A
Scale 1/2" = 1 ft.



CARBON COUNTY

At the beginning of the biennium there was the net sum of \$1,457.78 remaining in the State Road Fund available for use in Carbon County. During the biennium the State appropriated \$11,064.29, the County appropriated \$11,064.29, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$27,823.82 by Special Road Tax Levy, making a total of \$51,529.10, which has been available for road construction. From this sum \$39,241.39* has been expended, leaving a net balance of \$12,287.71 on hand.

In October, November and December of 1915, seven and one-half miles of road were graded of the newly designated road leading northeastwardly from Price through Soldier Creek Canyon and along the Minnie Maude Creek to Duchesne County. The grading was done on that portion of the road which lies between Price and the mouth of the canyon, where the road intersects Coal Creek.

About one mile of grading was also accomplished in Willow Creek Canyon in July and August of 1916, and half a mile was graded in July, 1916, at a point about half way between Helper and Castlegate. A few smaller miscellaneous stretches were graded during the biennium.

The most important work of the biennium was the surfacing of approximately fourteen miles of road throughout the County. About six miles between Price and Helper were surfaced with shale in July and August of 1916. Shale was also used as the surfacing material on a mile and a half of the road between Helper and Castlegate in 1916. Stretches of the road running south from Price, aggregating three miles in all, were surfaced with shale in July of 1916. One and one-half miles of the road between Price and Wellington were also surfaced with shale in July, 1916. One mile of the road at a point about midway between Wellington and Sunnyside

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	\$ 42,511.40
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	\$ 6,084.38
	<u>\$36,427.02</u>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	\$ 2,814.37
<i>Total Expenditures during the Fourth Biennium.....</i>	<u>\$39,241.39</u>

CARBON COUNTY

was surfaced with shale in July, 1916. One-half mile of the road which was graded in Willow Creek Canyon was surfaced in July, 1916.

The following designations of State Roads were made during the past biennium: The road from Price via Soldiers' Canyon to the Duchesne County Line was designated on January 10th, 1916. The road extending from a point one mile east of Whitmore Wash on the Price-Sunnyside Road, south to the Emery County line, was designated on April 24, 1916. The road extending from Castlegate northeastwardly through Willow Creek Canyon to connect with the Colton-Duchesne road, was also designated on April 24, 1916.

In September, 1915, the concrete floor was constructed on the steel truss bridge over the Price River, near the mouth of Horse Creek. The steel had been erected in the fall of the previous year, at which time the weather conditions prevented the construction of concrete work. This bridge is an earlier type than the present State Road standard. The concrete was formed on the bottom by arched sections of corrugated iron extending from stringer to stringer and remaining in the structure. The floor is sixteen feet wide and seventy-five feet long.

In the same year a small log stringer structure, fourteen feet in span, was constructed on the Midland Trail road, near Nolan to bridge over one of the mountain gulleys.

In 1916, three wood truss bridges were constructed in Carbon County as follows: At Castlegate a thirty-six foot span was constructed over the Price River. At Spring Glen, a thirty-foot span was constructed over Spring Glen Creek. On the Price-Sunnyside road a thirty-three foot truss was constructed over the Whitmore Wash.

The culverts constructed during the biennium consist of the following: twenty-four constructed of corrugated iron pipe, three of stone, five of wood, and two constructed of stone with wood tops. Only one of these culverts was constructed in 1915. The others were constructed in 1916.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Carbon County during the past biennium, as will be noted in the accompanying tables.

CARBON COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
CARBON COUNTY.
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$	312.28
1915-1916 State Appropriation.....		11,064.29
Motor Vehicle Fee Fund.....		118.92
Midland Trail Appropriation on Hand		
Dec. 1, 1914.....		916.83
Refund to Midland Trail Fund (Part		
Voucher "H")	4.81	\$12,417.13

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$	5,250.00	
1915-1916 County Appropriations....		11,064.29	
Balance Road Tax on Hand Dec. 1,			
1914		1,058.24	
1915 State Road Tax Collections Date			
of Levy to March 1, 1916.....		6,117.55	
1916 State Road Tax Collections Date			
of Levy to Nov. 30, 1916.....		21,003.72	
Additional Collections 1911 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		78.42	
Additional Collections 1912 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		15.19	
Additional Collections 1913 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		247.61	
Additional Collections 1915 State			
Road Tax March 1, 1916, to Dec. 1,			
1916	361.33	45,196.35	\$57,613.48

DISBURSEMENTS.

State Appropriation Fund.....	\$	8,368.51	
Midland Trail Fund.....		895.18	
County Appropriation Fund.....		9,439.57	
Special State Road Tax Levy.....		23,689.22	
Motor Vehicle Fee Fund.....		118.92	\$42,511.40
Gross Balance Dec. 1, 1916.....			\$15,102.08
Less Unpaid Labor and Purchases...			2,814.37
Net Balance, Dec. 1, 1916.....			\$12,287.71

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 6,756,723.00	1	....	\$ 6,756.72
1916	15,565,021.00	1½	....	23,347.53

CARBON COUNTY

MS



CARBON COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
CASTLEGATE-DUCHESNE	7.5	15 16	0.27 0.17	\$ 81.00	\$ 184.09	16	Shale	10	3	0.47	*	
CASTLEGATE-UTAH	7.4	15 18	0.15 0.20	175.72	502.16	16	Shale	12	6	0.68	\$ 730.72	\$ 1,074.59
PRICE-CASTLEGATE	11.0	20	0.26	51.00	196.15	20-40 30-40 20-30	Shale Shale Shale	16 16 15	10 12 12	3.06 0.87 1.00	5,796.57	1,175.77
PRICE-DUCHESNE	32.5	26	2.52	1,817.25	721.13							
PRICE-EMERY	10.0					20-40	Shale	16	10	1.88	1,339.45	712.47
PRICE-SUNNYSIDE	26.5					20-30	Shale	12	8	1.10	1,053.14	957.40
MUD SPRING-EMERY	5.0											
TOTAL	99.9		3.57	\$ 2,124.97	\$ 596.23					9.06	\$ 8,919.88	\$ 984.53

*Cost not segregated.

CARBON COUNTY

CARBON COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CARBON	Nolan Bridge	Log Stringer	Stone	14	14	All	\$ 694.39						
HELPER	Helper					Ap-proaches	263.18	Cor. Iron	1	18"	50	*	
SPRING GLEN	Spring Glen					Eng'g. Concrete Floor and Ap-proaches	3.67						
STORRS	Price Canyon ...	Steel Truss	Concrete	75	16		1,641.77						
TOTAL							\$2,603.01		1			*	

*Cost not segregated.

CARBON COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CASTLE GATE-DUCHESNE								Cor. Iron	6	12"	12		
								Cor. Iron	2	18"	16		
								Cor. Iron	2	24"	16	\$ 181.90	\$ 18.19
CASTLE GATE-UTAH								Cor. Iron	8	12"	12		
								Cor. Iron	1	15"	16		
								Cor. Iron	1	18"	16		
								Wood	1	*	*	220.72	20.07
PRICE-CASTLE GATE	Castle Gate	Wood Truss	Log and Stone	36	12	All	\$ 632.77						
PRICE-DUCHESNE								Cor. Iron	1	30"	36		
								Cor. Iron	1	48"	90		
								Wood	4	1'x1'	16		
								Stone-wood	1	6'x8'	60		
								Stone-wood	1	4'x6'	50		
								Stone	3	18"	18	1,432.25	130.20
PRICE-SUNNYSIDE	Whitmore Wash.	Wood Truss	Concrete	33	14	All	1,554.04	Cor. Iron	1	15"	28	21.25	21.25
TOTAL							\$2,186.81		33			\$ 1,856.12	\$ 56.25

*Dimensions not reported.

CARBON COUNTY

**(Carbon No. 41.) Typical Old Log Bridge with Double Deck and Crib Abutments
before Replacing with Standard Concrete Structure.**

**(Carbon No. 43.) Loading Wagons at Shale Pit for Construction of
Price-Castle Gate Road.**

CARBON COUNTY

(*Carbon No. 44*) **Wood Truss Bridge on the Price-Castle Gate Road,
Temporary Type.**

(*Carbon No. 45.*) **Truss Bridge with Wood Trestle Approaches
over Whitmore Wash.**

DAVIS COUNTY

At the beginning of the biennium there was the net sum of \$29,758.52 remaining in the State Road Fund available for use in Davis County. During the biennium the State appropriated \$9,464.29, the County appropriated \$9,464.29, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$40,743.15 by Special Road Tax Levy, making a total of \$89,549.17, which has been available for road construction. From this sum \$97,968.56* has been expended, leaving a deficit of \$8,419.39.

In June of 1915, the grading was commenced for the concrete road to be constructed between Clearfield and Layton. On July 23rd the concrete surfacing was begun at a point south of Clearfield and proceeded in a southeasterly direction toward Layton. Most of the labor incident to the construction was contributed by the convicts of the State Penitentiary. An average of 65 convicts and 20 hired men constituted the organization required for the one mixer. On November 4th, the work ceased at the town of Layton, after having constructed approximately 4.1 miles of concrete road. At the close of the concrete work the convicts returned to the Penitentiary to leave for Sevier Canyon in December. A small force of hired men remained on the work for the purpose of completing the shouldering.

The slab constructed on this road is 16 feet wide, 6 inches thick at the edges, and 8 inches thick in the center, having a 2-inch parabolic crown. A 1:1 $\frac{3}{4}$:3 $\frac{1}{2}$ mix was used for the concrete. The sand and gravel was obtained from the St. Joseph Pit owned by the County. The cement was obtained from the Devil's Slide plant of the Union Portland Cement Co. The shoulders were finished to a width of 4 feet on each side of the slab, and dropped thence on a 2 to 1 slope to the gutters. The expansion joints, which consist of a

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$81,533.98
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 3,462.90
	<hr/>
	\$78,071.08
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$19,897.48
Total Expenditures during the Fourth Biennium.....	<hr/>
	\$97,968.56

DAVIS COUNTY

$\frac{1}{4}$ -inch thickness of tarred felt or asphalt filler, were spaced an average of 25 feet apart. The joints extend at right angles across the slab. No steel armor plates were used in any of the joints.

The preliminary grading for the concrete road between Farmington and Kaysville was commenced in June of 1916, and the work of constructing the concrete was commenced on August 4th. By October 31st approximately 2.5 miles of concrete had been poured. The work was begun at a point about one mile northwest of Farmington and was closed at a point about a third of a mile within the city limits of Kaysville. This work was also handled in most part by the State Convicts, the organization consisting of an average of 60 convicts and 30 hired men. The shouldering work and the construction of the guard rails was completed in the months of October and November. Most of the shouldering of this road was done by convict labor. The railings were constructed by hired men.

The concrete slab for this road was built to the same dimensions and specifications as for the slab which was constructed between Clearfield and Layton. The cement was obtained from the Union Portland Cement plant at Devil's Slide, and the sand and gravel was procured in most part from the Mellen plant in North Salt Lake. The original road grade on this stretch of road was comparatively uneven, necessitating deep cuts and fills in many places.

In four different places the fills were so great as to require guard rails on both sides of the roadway. The railings are of substantial design, being constructed of heavy posts and rails with a sheet iron covering over the rail joint at each post.

The greatest fill is at Secrist Hill at which point the concrete was omitted for a distance of 600 feet pending a compact settlement of the new road bed. This stretch of road will be ready for concrete when the construction season opens. The guard rail, however, was constructed in place parallel to the proposed grade and alignment of the concrete. In each of the places mentioned the fencing has been located

DAVIS COUNTY

just 6 feet out from the edge of the concrete. The shoulders were constructed 9 feet wide at these points so as to leave a bank 3 feet wide on the outside of the guard rail for the purpose of supporting the latter.

Expansion joints were placed 25 feet apart on all the work except where light fills were located. At these points reinforcement was used as a precaution against the effects of settling, and the expansion joints were placed 50 feet apart. Heavy fills required reinforcing as well as a 25-foot spacing of the joints. All joints are one-fourth of an inch thick. In the work between Farmington and Kaysville, the "Sandwich Joint" was used. This type of filler consists of about an eighth of an inch of asphalt included between two thin sheets of tarred felt, making a total thickness of $\frac{1}{4}$ inch. The strips are stiff but not brittle, making a filler material which is easy to handle.

The general methods and processes used in the construction of the concrete roads during the past biennium were practically the same as those described in the Third Biennial Report. "Pool Curing" was used at all times, except on grades too steep to retain the water. At such places it was found necessary to "irrigate," that is, to run the water over the concrete in a percolating stream between banks of earth constructed on the edges of the slab.

Another departure from the previous methods of construction was that of mixing the concrete to a dryer and stiffer consistency and then tamping it in place. This procedure was resorted to in the 1916 work, the purpose being to produce a denser concrete.

The "Belt Finisher" was first used in Davis County in the latter part of 1916. A 6-ply, 12-inch rubber canvas belt, 20 feet long was used to produce the finished surface of the concrete, which had previously been accomplished by the "Hand Float" method. The new method produced a more satisfactory surface, at practically the same cost. Since this experimental trial of the belt finisher, it has been adopted on all of the State Road concrete work.

In April and May of 1916 about a third of a mile of grading work was done on that part of the road from River-

DAVIS COUNTY

dale to Devils Gate, which lies in Davis County. A great improvement was made in both the grade and alignment of this old road. The road was constructed with the idea of surfacing it with gravel in the near future.

Fifty-six culverts were constructed in Davis County during the past biennium, twenty in 1915, and thirty-six in 1916. Thirty-eight of the culverts mentioned are of concrete pipe, fourteen are of corrugated iron pipe, and four are of reinforced concrete. No bridges were constructed on the State Road during the biennium.

The culverts constructed under the concrete road are mostly of concrete pipe. Special provision was made for making these culverts water tight. The joints were carefully calked with cement mortar of a one-two mix.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Davis County during the past biennium, as will be noted in the accompanying tables.

DAVIS COUNTY

STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
DAVIS COUNTY
1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand Dec. 1, 1914 (\$1,087.34 plus \$20.00).	\$ 1,107.34	
1915-1916 State Appropriations.....	9,464.29	
Motor Vehicle Fee Fund.....	118.92	\$10,690.55

County Appropriations and Tax Levies:

1915-1916 County Appropriations....	\$ 9,464.29		
Balance Road Tax on Hand Dec. 1, 1914	32,114.08		
1915 State Road Tax Collections Date of Levy to March 13, 1916.....	20,517.14		
1916 State Road Tax Collections Date of Levy to Nov. 30, 1916.....	15,491.62		
Additional Collections 1911 State Road Tax Oct. 1, 1914, to Dec. 1, 1916	12.53		
Additional Collections 1912 State Road Tax Oct. 1, 1914, to Dec. 1, 1916	28.16		
Additional Collections 1913 State Road Tax Oct. 1, 1914, to Dec. 1, 1916	280.97		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	4,412.73	82,321.52	\$93,012.07

DISBURSEMENTS.

State Appropriation Fund.....	\$10,538.06	
County Appropriation Fund.....	9,454.86	
Special State Road Tax Levy.....	61,422.14	
Motor Vehicle Fee Fund.....	118.92	\$81,533.98
Gross Balance Dec. 1, 1916.....		\$11,478.09
Less Unpaid Labor and Purchases...		19,897.48
*Deficit Dec. 1, 1916.....		\$ 8,419.39

*Deficit covered by 1916 tax collections to be remitted after Dec. 1, 1916.

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 6,977,911.00	3	....	\$20,933.73
1916	15,125,550.00	1½	....	22,688.32

*This balance was reported as \$1,087.34 by mistake at the end of the Third Biennium, and was later corrected to read \$1,107.34. An apparent difference of \$20.00 will therefore exist between the Third and Fourth Biennial Reports for this County.

DAVIS COUNTY—ROAD CONSTRUCTION, 1915.												
PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
CONSOLIDATED	34.2	25	0.61	\$ 1,053.69	\$ 253.90	30	Concrete	16	6-8	4.10	\$41,018.39	\$ 1,000.44
		30	3.54									
TOTAL	34.2		4.15	\$ 1,053.69	\$ 253.90	30	Concrete	16	6-8	4.10	\$41,018.39	\$ 1,000.44

DAVIS COUNTY

ROAD	Miles of State Road Designated	ROAD GRADED			ROAD SURFACED							
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
FARMINGTON-SALT LAKE	11.8											
FARMINGTON-WEBER	14.9	16 34 45	0.15 0.36 0.13	\$ 4,355.53	\$ 2,920.00		Gravel Concrete	16 16	8 7½	0.23 2.45	\$42,320.93	\$15,791.39
SOUTH WEBER	7.5	20	0.33	752.01	3,278.■							
TOTAL	34.2		1.47	\$ 5,107.54	\$ 3,474.59					2.68	\$42,320.93	\$15,791.39

DAVIS COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

ROAD	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
FARMINGTON- WEBER								Con. Pipe	2	8"	106		
								Con. Pipe	10	12"	31		
								Con. Pipe	6	15"	50		
								Con. Pipe	10	18"	80		
								Con. Pipe	1	24"	30		
								Concrete	1	2½'x4'	17		
								Concrete	1	3'x5'	16		
								Concrete	1	5'x3'	6		
								Cor. Iron	1	12"	24		
								Cor. Iron	1	18"	14		
								Cor. Iron	1	24"	37		
								Cor. Iron	1	30"	6	\$ 2,686.29	\$ 74.90
TOTAL									36			\$ 2,686.29	\$ 74.90

DAVIS COUNTY

(Davis No. 70.) Pool Curing of Concrete Road North of Layton.



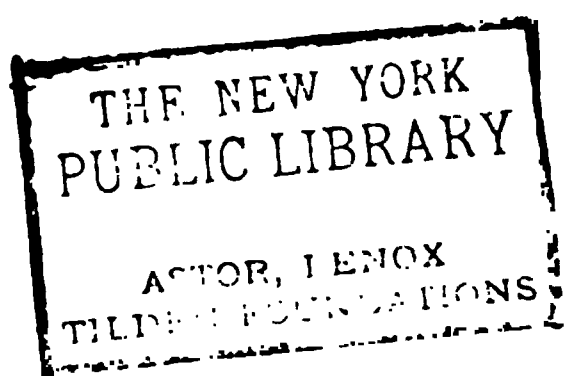
(Davis No. 73.) Concrete Road North of Layton, Showing Dry Pools at End of Curing Period.

DAVIS COUNTY



Davis No. 60.) Detail Photograph of Split Float Used in Finishing at Expansion Joints.

, No. 71.) Method of Filling Pools by Means of Launder Attached to Old Sprinkling Standard Pipe.



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DUCHESNE COUNTY

At the beginning of the biennium the new county of Duchesne was just created and no credits or deficits were remaining on hand from the previous period. During the biennium the State appropriated \$11,064.29, the County appropriated \$2,766.07, the Motor Vehicle Fee Fund amounted to \$94.87, and the County raised \$8,108.17 by Special Road Tax Levy, making a total of \$22,033.40, which has been available for road construction. From this sum \$18,857.27* has been expended, leaving a net balance of \$3,176.13 on hand.

The grading work accomplished in Duchesne County during the past biennium consists of three miles in the vicinity of Roosevelt graded in May, 1916, two stretches of one-half mile each near Myton graded in March, 1915, and June, 1916, a mile stretch at a point six miles west of Myton graded in April, 1915, a two mile stretch at a location six miles east of Duchesne graded in May, 1915, one mile just east of Duchesne graded in July, 1916, one mile just west of Duchesne graded in August, 1916, four miles at a location nine miles west of Duchesne graded in September, 1916, one mile near the Wasatch County line at a point about twenty-seven miles west of Duchesne graded in August and September, 1916, one and a half miles located about fifteen miles southwest of Duchesne graded in August, 1916, and about four miles at the summit at the head of Indian Creek graded in October and November, 1915, and September, 1916.

The work of surfacing roads was not very extensive in Duchesne County during the period covered by this report. A stretch one-half mile in length near Roosevelt was surfaced with clay in May, 1916. A stretch two-thirds of a mile long just east of Duchesne was surfaced with gravel in July, 1916. A small stretch of 1,100 ft. about 10 miles southwest of Duchesne was surfaced with shale in August, 1916,

*EXPENDITURES.

Total Disb. received during the Fourth Biennium.....	\$16,794.96
Less Unpaid Labor and Purchases from Third Biennium.....	none
	\$16,794.96
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 2,062.31
Total Expenditures during the Fourth Biennium.....	\$18,857.27

DUCHESNE COUNTY

and a stretch of 700 ft. just west of Myton was surfaced with gravel in April, 1916.

The U. S. Forest Service surveyed thirty miles of the Helper-Duchesne Road in 1915 at a cost of \$647.41, and in 1916, one and six-tenths miles of graded roads were constructed at a cost of \$2,639.73. This work was all done within the Uinta National Forest Reserve.

There were fifty-four culverts constructed on the State roads in Duchesne County during the past biennium, thirty-one in 1915, and twenty-three in 1916. Thirty-one of these culverts were constructed of wood, eleven of logs, and twelve of corrugated iron pipe. No bridges were constructed during the past biennium.

Considerable repair and maintenance of roads, bridges and culverts, also some miscellaneous work, was accomplished in Duchesne County during the biennium. The U. S. Forest Service also did some maintenance work in Indian Canyon on the Duchesne-Carbon Road, amounting to \$243.50 in 1915 and \$156.00 in 1916.

DUCHESNE COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS IN DUCHESNE COUNTY 1915-1916.

RECEIPTS

State Appropriations:

1915-1916 State Appropriations.....	\$11,064.29	
Motor Vehicle Fee Fund.....	94.87	\$11,159.16

County Appropriations and Tax Levies:

1914 State Road Tax Collections Date of Levy to Jan. 1, 1915.....	\$ 3,019.80		
1915-1916 County Appropriations....	2,766.07		
1915 State Road Tax Collections Date of Levy to Dec. 1, 1916.....	4,611.79		
Additional Collections 1911 State Road Tax April 6, 1915, to Nov. 30, 1916 .....	.56		
Additional Collections 1912 State Road Tax April 6, 1915, to Nov. 30, 1916	11.68		
Additional Collections 1913 State Road Tax April 6, 1915, to Nov. 30, 1916	11.50		
Additional Collections 1914 State Road Tax Jan. 1, 1915, to Dec. 1, 1916	452.84	10,874.24	\$22,033.40

DISBURSEMENTS.

State Appropriation Fund.....	\$ 8,643.33	
County Appropriation Fund.....	1,557.21	
Special State Road Tax Levy.....	6,499.55	
Motor Vehicle Fee Fund.....	94.87	\$16,794.96
Gross Balance Dec. 1, 1916.....		\$ 5,238.44
Less Unpaid Labor and Purchases...		2,062.31
Net Balance Dec. 1, 1916.....		\$ 3,176.13

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 1,671,058.00	3	....	\$ 5,013.17
1916	4,040,698.00	2	2.37	8,079.02

DUCHESNE COUNTY

DUCHESNE COUNTY

DUCHESNE COUNTY

DUCHESNE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.

PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
DUCHESNE								Cor. Iron	3	12"	16		
								Wood	2	1'x2'	14		
								Wood	1	5'x9'	14		
								Wood	2	5'x10'	14		
								Wood	3	10'x10'	10	\$ 136.95	\$ 13.70
MYTON								Wood	7	1'x2'	16		
								Wood	3	1'x3'	16		
								Wood	1	2'x2'	16		
								Wood	2	5'x10'	14	146.79	11.29
ROOSEVELT								Wood	3	1'x3'	18		
								Wood	2	2'x3'	20		
								Wood	3	3'x3'	20	118.38	14.80
TOTAL									31			\$ 402.12	\$ 12.97

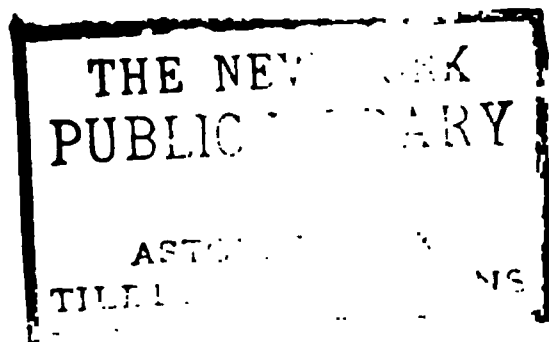
DUCHESNE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
DUCHESNE-UINTA								Cor. Iron	1	12"	20	\$ 499.78	\$ 49.98
								Cor. Iron	2	15"	22		
								Cor. Iron	2	16"	24		
								Cor. Iron	2	18"	20		
								Cor. Iron	1	20"	16		
								Wood	1	6'x6'	16		
								Wood	1	10'x12'	16		
DUCHESNE-UTAH								Cor. Iron	1	12"	18		
								Cor. Iron	1	15"	18		
								Log	1	2'x1'	22		
								Log	1	2'x2'	24		
								Log	1	3'x2'	24		
								Log	1	3'x15"	28		
								Log	4	3'x3'	18	334.38	27.86
								Log	2	4'x3'	25		
DUCHESNE-WASATCH								Log	1	3'x6'	20	97.50	97.50
TOTAL									23			\$ 931.66	\$ 40.51

DUCHESNE COUNTY

Duchesne No. 1.) **Steel Truss Bridge over Duchesne River at Myton.**

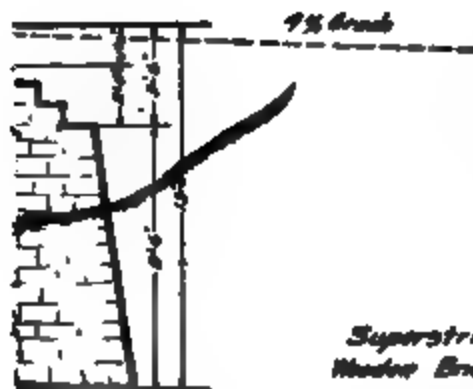
Duchesne No. 2.) **Log Truss Bridge between Vernal and Roosevelt.**





ELEVATION

5



BILL OF MATERIAL

Masonry in Abutments
 348 Cu Yd of Stone
 128 Bbls of Cement (76 Sacks)
 80 Cu Yd Sand
 Volume of Mortar = 95 cu yds

Superstructure to be Standard 50' Span
 Wooden Bridge

to run down to solid material
 foundation of piling
 to be used in Masonry with
 Volume of mortar 10% of total
 or 95 cu yds

UTAH STATE ROAD COMMISSION	
REVISED DESIGN OF ABUTMENTS	
STRAWBERRY RIVER BRIDGE	
DUCHENE COUNTY	
E. R. Morgan, State Road Engineer Salt Lake City, Utah	
Designed by...	Drawn by...
Checked by...	Reviewed by...
Approved by...	From...
M-28	

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ASTOR LENOX
TILDEN FOUNDATIONS

EMERY COUNTY

At the beginning of the biennium there was the net sum of \$5,925.61 remaining in the State Road Fund available for use in Emery County. During the biennium the State appropriated \$9,464.29, the County appropriated \$4,732.14, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$16,503.72 by Special Road Tax Levy, making a total of \$36,744.68, which has been available for road construction. From this sum \$32,718.19* has been expended, leaving a net balance of \$4,026.49 on hand.

In July and August of 1916, the entire road from a point three miles west of Green River, thence paralleling the Denver & Rio Grande Railroad to Woodside and on to Mounds, was graded. The work amounted to one continuous stretch of thirty-eight miles. In August, 1916, one-fourth mile of the road at a point five miles northwest of Orangeville was graded, and in October and November of the same year about nine and one-half miles were graded on the road between Castle Dale and Green River. Small stretches were graded in the town of Clawson in the months of June, 1915, and March, 1916. A small stretch was also graded in the town of Emery in August, 1916. No surfacing work was accomplished in Emery County during the past biennium.

In 1916, the engineering work and the location survey work for the State Road entering the Manti National Forest nine miles west of Orangeville was undertaken by the U. S. Forest Service. In the same year two and one-half miles were completely graded by this organization. The finished stretch of roadway crosses the east boundary of the Reserve, one mile lying to the east of the line and one and one-half miles to the west. The sum of \$727.62 was expended by the Government for the engineering and surveying, and \$2,000.00

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$29,778.30
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 3,644.17
	<u>\$26,134.13</u>
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 6,584.06
Total Expenditures during the Fourth Biennium.....	<u>\$32,718.19</u>

EMERY COUNTY

plus the statutory salaries of the rangers was expended for the grading.

The following designations of State Roads were made during the past biennium: The road from Hutington to Mohrland was designated on December 19, 1914. The road from Orangeville west along Cottonwood Creek to the Sanpete County line, to connect with the road to Ephraim, was designated on November 22, 1915. The road extending northwestwardly from Green River, along the D. & R. G. Railroad, via Woodside, to the Carbon County line, to join the road extending to Whitmore Wash on the Price-Sunnyside Road was designated on April 24, 1916.

In 1915 the Wilberg Wash bridge was completed, most of the work having been done in the previous biennium. This bridge has a standard wood truss super-structure of 35-foot span and concrete abutments. The Five Mile Wash bridge was also completed in 1915, three-fourths of the work having been done in the previous year. This bridge has a span of 25 feet and is also a standard wood truss structure with concrete abutments. The Mile-North-of-Ferron bridge was constructed of log stringers on concrete abutments. This bridge has a span of eighteen feet parallel to the roadway, and is constructed on a 25-degree skew. Concrete footings for the trestle bents of the Ferron Dry Wash bridge were constructed in 1915, also a masonry lining for the channel beneath the bridge.

The Cedar Creek bridge was constructed in 1916. This bridge is over a deep wash and is, therefore, constructed of a 25-ft. wood truss structure with a 16-ft. trestle approach at each end, thereby doing away with expensive abutments and fills. The trestle bents are set on concrete footings which are built to a height above high water. The roadway is sixteen feet wide. The construction of the Cleveland Canal bridge was undertaken in 1916, and a design was made for the Sand Wash bridge in the same year. A wood structure was also built for Goat Wash.

The chief bridge work of the year consists of the construction of the Ivie Creek and the Quitchumpah bridges. Both bridges were installed on the Castle Dale-Sevier Road.

EMERY COUNTY

The Quitchumpah bridge is a standard 40-ft. span wood truss structure with a 12-ft. wood stringer approach at each end. Masonry piers about twenty feet in height support the trusses and the ends of the approaches. The outer ends of the approaches are supported by short masonry footings set into the banks. The construction of piers and stringer approaches proved to be more economical than the construction of abutments and fills for such a deep wash. The roadway is sixteen feet wide.

The Ivie Creek bridge is a standard 60-ft. wood truss structure of single span. This bridge spans a good sized stream whose banks, however, are of solid rock. Masonry abutments were set, therefore, on the solid rock at elevations of seven feet and eleven feet below the road grade, whereas the channel bottom is as deep as 25 feet below the grade of the road over the bridge. The roadway is sixteen feet wide in the clear. This bridge is located practically on the County line between Emery and Sevier Counties on the road from Salina to Castle Dale, and for that reason the cost of the bridge has been equally divided between the two counties.

Thirty-six culverts were constructed in Emery County during the past biennium, six in 1915 and thirty in 1916. Of those constructed, twenty-five are of wood, nine of corrugated iron pipe and two of stone and wood.

Considerable repairing and dragging of roads and other maintenance and miscellaneous work was done during the biennium, as will be noted in the accompanying tables.

EMERY COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
EMERY COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	151.64	
1915-1916 State Appropriations		9,464.29	
Motor Vehicle Fee Fund.....		118.92	\$ 9,734.85

County Appropriations and Tax Levies:

Balance County Appropriation on				
Hand Dec. 1, 1914.....	\$	16.07		
1915-1916 County Appropriations....		4,732.14		
Balance Road Tax on Hand Dec. 1,				
1914		9,402.07		
1915 State Road Tax Collections Date				
of Levy to Dec. 31, 1915.....		8,729.39		
1916 State Road Tax Collections Date				
of Levy to Nov. 30, 1916.....		7,153.22		
Additional Collections 1911 State				
Road Tax Dec. 31, 1911, to Dec. 1,				
1916		17.55		
Additional Collections 1912 State				
Road Tax Dec. 31, 1912, to Dec. 1,				
1916		52.27		
Additional Collections 1913 State				
Road Tax Dec. 1, 1914, to Dec. 1,				
1916		153.40		
Additional Collections 1914 State				
Road Tax Dec. 1, 1914, to Dec. 1,				
1916		296.37		
Additional Collections 1915 State				
Road Tax Dec. 31, 1915, to Dec. 1,				
1916		101.52	30,654.00	\$40,388.85

DISBURSEMENTS.

State Appropriation Fund.....	\$ 9,582.90	
County Appropriation Fund.....	889.22	
Special State Road Tax Levy.....	19,187.26	
Motor Vehicle Fee Fund.....	118.92	\$29,778.30
Gross Balance Dec. 1, 1916.....		\$10,610.55
Less Unpaid Labor and Purchases...		6,584.06
Net Balance Dec. 1, 1916.....		\$ 4,026.49

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Gain in Fractions	Levy
1915	\$ 3,268,049.00	3	1.14	\$ 9,805.29
1916	6,153,987.00	2	....	12,307.98

EMERY COUNTY

EMERY COUNTY

EMERY COUNTY—ROAD CONSTRUCTION, 1916.												
ROAD	Miles of State Road Designated	ROAD GRADED			ROAD SURFACED						Total Expenditures	Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles		
CASTLEDALE-CARBON	21.7											
CASTLEDALE-GREEN RIVER	55.1	20	9.40	\$ 4,296.54	\$ 457.08	30	Slate	12	8	0.57	*	
CASTLEDALE-SANPETE	17.5	16	0.23	4,545.49	19,763.00							
CASTLEDALE-SEVIER	31.5	16 30	0.25 0.57	2,017.29	2,460.11							
GREENRIVER-CARBON	40.2	20	39.00	822.25	21.08							
MOHRLAND	7.5											
TOTAL	173.5		49.45	\$11,681.57	\$ 236.23					0.57		

*Cost included in grading.

EMERY COUNTY

PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CASTLEDALE FERRON	Wilberg Wash ..	Wood Truss	Concrete	35	16	50%	\$ 373.18	Wood	1	•	•	\$ 14.50	\$ 14.50
	Mile North of Ferron	Wood and Log Stringer	Concrete	18	16	25%	242.98	Cor. Iron Wood	1	30"	16	126.00	42.00
	Ferron Dry Wash	Trestle Bent Log Stringer	Concrete Footings	64	16	Footing and lining channel	398.60		2	•	•		
HUNTINGTON	Cedar Creek	Wood Truss and Trestle	Concrete Footings	16-25-16	16	Eng'g.	11.12	Cor. Iron Wood	1	24"	16	25.00	12.50
	Five Mile Wash..	Wood Truss	Concrete	25	16	25%	200.79		1	•	•		
TOTAL							\$1,226.67		6			\$ 165.50	\$ 27.54

*Dimensions not reported.

*Dimensions not reported.

EMERY COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

*Total cost \$1,372.60 divided equally by Emery and Sevier Counties.
†Dimensions not reported.

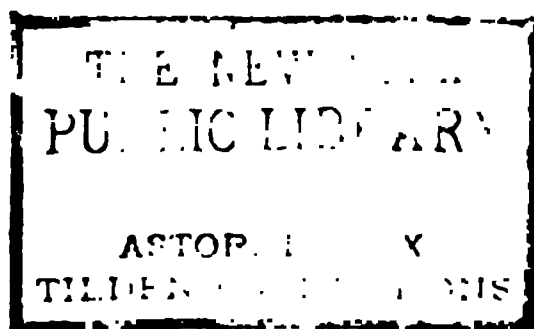
*Total cost \$1,372.60 divided equally by Emery and Sevier Counties.

!The material has not been reported.

37.) **Standard Wood Truss Bridge being Constructed over Ivie Creek.**
Span 60 ft.

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GARFIELD COUNTY

At the beginning of the biennium there was the net sum of \$3,557.38 remaining in the State Road Fund available for use in Garfield County. During the biennium the State appropriated \$11,064.29, the County appropriated \$2,766.07, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$3,952.59 by Special Road Tax Levy, making a total of \$21,439.25, which has been available for road construction. From this sum \$20,093.30* has been expended, leaving a net balance of \$1,345.95 on hand.

Between the months of June and November, in 1915, the full extent of the road between Panguitch and Orton was graded. This stretch of road is about ten miles long. One short stretch of this road was surfaced with gravel.

In 1916, seven miles of grading work was done during August and September on the Hillsdale-Henrieville Road, along that section of the road which crosses the East Fork of the Sevier River.

In October and November of 1916 six miles were graded from Winder northwardly toward Coyote. Also in the same month about 1½ miles were graded just north of Coyote.

On the road running from Panguitch southwardly to Hillsdale, nearly a mile was graded just east of Panguitch in April of 1916.

Several years ago a relocation of the road from Panguitch to Hatch was considered. In 1916 the change was commenced. The route chosen parallels the Sevier River on the west side, the old road having been on the east side of the river. The new location eliminates two crossings of the Sevier, which crossings would have required new structures if the old road had remained in use. The construction of this road will require more work in grading than would an improvement of the old road. However, the elimination

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$14,264.33
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 620.00
	\$13,644.33
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 6,448.97
Total Expenditures during the Fourth Biennium.....	\$20,093.30

GARFIELD COUNTY

of the crossings mentioned, the better grade, the fewer culverts required, and the lower cost of maintenance due to the character of the topography, all contribute to a justification of the change.

Two and one-half miles of this road were worked upon in the months of September, October and November, but the grading was not completed by the end of the biennium.

During the past biennium, ten miles of roadway were constructed by the Federal Road Department in the canyon west of Escalante. The work extends westwardly from the east boundary of the Powell National Forest to the summit. Eight and one-half miles were graded in 1915, and one and one-half miles in 1916. The Government expended \$10,662.72 on construction and \$526.56 on the survey in 1915, and \$1,218.00 on construction in 1916.

Two new designations of State Roads were made by the Commission during the past biennium. The road extending northwardly from Coyote to the Piute County line was designated January 13, 1915. The road extending northeastwardly from Orton to the Piute County line, to connect with the road to Circleville was designated December 21, 1915.

In 1915, the following bridges were constructed; A concrete slab bridge of ten-foot span was constructed over Three Mile Creek in Panguitch Precinct. A wood truss bridge of twenty-five foot span was constructed over Spry Wash in the same precinct. In Orton precinct, two concrete slab bridges, each of ten-foot span, were constructed over Lefevere Wash and Bear Creek respectively. Each of the bridges mentioned has a clear width of roadway of sixteen feet.

In 1916, no bridges were constructed. A survey was made however for the Panguitch Bridge, and a design was prepared for a concrete slab bridge of twenty-foot span to be used for this site. The bridge will be a skew span and the abutments as well as the slab will be reinforced with square steel rods.

Eight Corrugated iron pipe culverts were constructed in 1915 in Panguitch and Orton Precincts and eleven culverts

GARFIELD COUNTY

of the same type were constructed in 1916 on the Hillsdale-Henrieville and the Panguitch-Piute roads.

Considerable repair and maintenance of roads, bridges and culverts, and also some miscellaneous work, was accomplished during the biennium. Some maintenance work was also pursued by the U. S. Forest Service in the Powell National Forest on the road between Escalante and Winder, amounting to \$157.00 in 1915 and \$322.50 in 1916.

GARFIELD COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
GARFIELD COUNTY.
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	374.29	
1915-1916 State Appropriations.....		11,064.29	
Motor Vehicle Fee Fund.....		118.92	\$11,557.50

County Appropriations and Tax Levies:

Balance County Appropriation on		
Hand Dec. 1, 1914.....	\$	100.00
1915-1916 County Appropriations....		2,766.07
Balance Road Tax on Hand Dec. 1,		
1914		4,076.51*
1915 State Road Tax Collections Date		
of Levy to Final Settlement.....		3,769.63
Additional Collections 1914 State		
Road Tax Dec. 1, 1914, to Feb. 23,		
1915		162.96
		<u>\$10,875.17</u>

Less Corrections 1911 and 1913, Tax			
Levy Reports Entered in Approp.			
Ledger Prior to Dec. 1, 1914.....	373.42*	10,501.75	\$22,059.25

DISBURSEMENTS.

State Appropriation Fund.....	\$	8,327.49	
County Appropriation Fund.....		978.37	
Special State Road Tax Levy.....		4,839.55	
Motor Vehicle Fee Fund.....		118.92	\$14,264.33
			<u>\$ 7,794.92</u>
Gross Balance Dec. 1, 1916.....			6,448.97
Less Unpaid Labor and Purchases...			<u>\$ 1,345.95</u>
Net Balance Dec. 1, 1916.....			

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 1,049,437.00	4	....	\$ 4,197.74
1916	2,253,271.00	2	....	4,506.54

*A diminution of \$373.42 should be made from \$4,076.51 to give the correct road tax balance on hand at the end of the Third Biennium, likewise the total balance on hand as reported in the Third Biennial Report should be \$3,557.38, instead of \$3,930.80.

GARFIELD COUNTY

GARFIELD COUNTY—ROAD CONSTRUCTION, 1915.

PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Total Expenditures	Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles			
BEAR CREEK	18.4	24	1.75	\$1,071.50	\$ 61.23								
CANNONVILLE	5.4												
COYOTO	3.1												
ESCALANTE	17.4												
HATCH	15.2												
HENDERSON	14.0												
HENRIEVILLE	2.0												
PANGUITCH	19.6	24 30	2.90 3.00	4,184.40	709.22	24	Gravel	18	8	0.34	*		
TROPIC	23.0												
TOTAL	118.1		7.73	\$5,255.90	\$ 679.94					0.34			

*Cost not segregated.

GARFIELD COUNTY

GARFIELD COUNTY

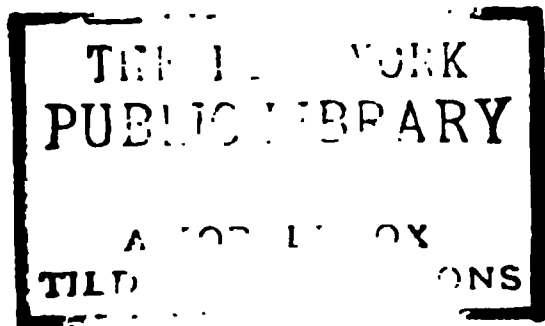
PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
BEAR CREEK	Leiferens Wash..	Concrete Slab	Concrete	10	16	All	\$ 543.03	Cor. Iron	2	15"	24		
	Bear Creek	Concrete Slab	Concrete	10	16	All	609.97	Cor. Iron	1	36"	30	220.53	73.51
PANGUITCH	1-Mile Creek	Concrete Slab	Concrete	9'-3"	16	All	579.71	Cor. Iron	2	12"	34		
	Spry Wash	Wood Truss	Concrete	25	16	All	531.89	Cor. Iron	3	15"	24		
	Panguitch	Concrete	Concrete	20	16	Eng'g.	20.75					158.45	31.69
TOTAL							\$2,364.33		8			\$ 378.96	\$ 47.37

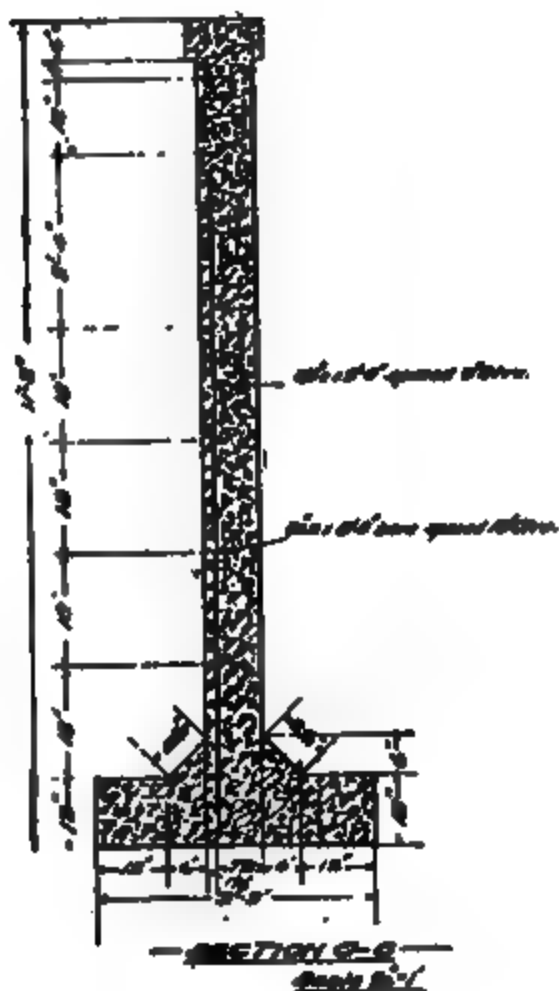
GARFIELD COUNTY

GARFIELD COUNTY--BRIDGE AND CULVERT CONSTRUCTION, 1916.												
ROAD	BRIDGES						CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
HILSDALE-HENRIEVILLE								1	24"	30	\$ 48.00	\$ 48.00
PANGUITCH-PIUTE	Panguitch	Concrete	Concrete	19	16	Eng'g.	\$ 29.37	7	12" 15"	24 24	247.18	24.72
								3				
TOTAL							\$ 29.37	11			\$ 295.78	\$ 26.89

GARFIELD COUNTY

(*Garfield No. 6.*) **Deep Cut in Clay Bank on State Road
between Panguitch and Hillsdale.**





<u>60412471</u>	
70412471	20 4-11-68
60412471	20 4-11-68
60412471	20 4-11-68
60412471	20 4-11-68

SOUTH OF THE RIVER		
57-40' x 20' 6"	Bar	2225 lbs.
70-40' x 20' 6"	"	742 "
40-40' x 20' 6"	"	472 "
18-40' x 20' 6"	"	262 "
10-40' x 20' 6"	"	272 "
20-40' x 20' 6"	"	182 "
	Total	4625 "



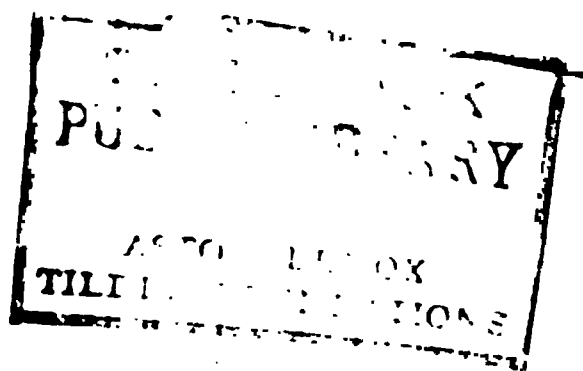
1. *For more information*
 call 1-800-368-5868

2. *For more information*
 call 1-800-368-5868

**STATE ROAD COMMISSION,
PACIFIC CREEK BRIDGE
RESEARCH - FULTON ROAD
HARTFIELD COUNTY.**

612 Morgan State Road Department, San Luis City.

Approved By: <i>[Signature]</i>	Specs. By: <i>[Signature]</i>
Drawn By: <i>[Signature]</i>	Engineer: <i>[Signature]</i>
Checked By: <i>[Signature]</i>	Asst. Engr: <i>[Signature]</i>
<div style="border: 1px solid black; padding: 5px; display: inline-block;">D-82</div>	



GRAND COUNTY

At the beginning of the biennium there was the net sum of \$10,381.03 remaining in the State Road Fund available for use in Grand County. During the biennium the State appropriated \$9,464.29, the County appropriated \$2,366.07, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$2,447.17 by Special Road Tax Levy, making a total of \$24,777.48, which has been available for road construction. From this sum \$23,282.57* has been expended, leaving a net balance of \$1,494.91 on hand.

In November, 1915, fifteen and one-half miles of road were graded from Thompsons southwestwardly to Valley City and thence southeastwardly to a point about three miles north of Court House Spring. In the vicinity of Moab three little stretches, aggregating about two-thirds of a mile, were graded previous to surfacing with shale and clay. Both the grading and the surfacing were done in April, August, September and October of 1915. A small stretch of one-third of a mile, located about three miles west of the Grand River, was surfaced with shale in March, 1915.

Only two very small stretches of grading were accomplished in 1916. These strips of work are about 200 feet each, and were graded in August on the road between Little Grand and Elgin.

The following roads were officially designated as State Roads during the past biennium: The road from Moab via Valley City, Thompsons, White Horse, Cisco, and Westwater, to the Colorado line, and from Moab southeastwardly to the San Juan County line, was designated December 21, 1915. The road from Moab to Castleton, by way of the Grand River, was designated June 26, 1916.

In 1915 the steel superstructure of the Court House Wash Bridge was erected on the concrete abutments which

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$22,581.62
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 2,708.97
	<u>\$19,872.65</u>
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 3,409.92
Total Expenditures during the Fourth Biennium.....	<u>\$23,282.57</u>

GRAND COUNTY

had been constructed in the previous year. In order to haul the steel over the forty miles of rough road from Thompsons to near Moab it was necessary to take apart the truss members by shearing the rivets at the gusset plates. The trusses were then built up again at the bridge site by riveting the members together on the ground. Gin poles and large chains in blocks were used to swing the trusses into place. The steel was erected in January and February and the concrete floor was constructed in February and March. In November and December the east abutment was replaced on account of the poor material, poor workmanship and poor weather under which the original abutment had been constructed. This bridge has a span of one hundred feet and a reinforced concrete roadway sixteen feet in width. It was built from the standard designs of the State Road Commission. A good sized fill forms the east approach to the bridge. The fill is well rip-rapped on both sides.

In 1915 five culverts were constructed, three of stone, one of stone and wood, and one of wood. In 1916 two stone culverts and one wood culvert were constructed.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Grand County during the past biennium, as will be noted in the accompanying tables.

GRAND COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS

IN
GRAND COUNTY
1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 1,159.01	
1915-1916 State Appropriations.....	9,464.29	
Motor Vehicle Fee Fund.....	118.92	
Midland Trail Fund on Hand Dec. 1, 1914	485.14	
Refunds to Midland Trail Fund From Dec. 1, 1914, to Dec. 1, 1916.....	205.79	\$11,433.15

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ 1,924.50		
1915-1916 County Appropriations....	2,366.07		
Balance Road Tax on Hand Dec. 1, 1914	9,315.56		
1915 State Road Tax Collections Date of Levy to Feb. 7, 1916.....	1,755.74		
Additional Collections 1911 State Road Tax Dec. 31, 1912, to Dec. 1, 1914	4.08		
Additional Collections 1911 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	19.85		
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	37.18		
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	31.40		
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	18.79		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	563.61		
Additional Collections 1915 State Road Tax Feb. 7, 1916, to Dec. 1, 1916	16.52	16,053.30	\$27,486.45

DISBURSEMENTS.

State Appropriation Fund.....	\$10,159.42	
County Appropriation Fund.....	1,915.75	
Special State Road Tax Levy....	10,387.53	
Motor Vehicle Fee Fund.....	118.92	\$22,581.62
Gross Balance Dec. 1, 1916.....		\$ 4,904.83
Less Unpaid Labor and Purchases...		3,409.92
Net Balance Dec. 1, 1916.....		\$ 1,494.91

GRAND COUNTY**STATEMENT OF ROAD TAX LEVIES.**

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 1,903,832.00	1	....	\$ 1,903.83
1916	4,329,977.00	2	....	8,659.95

GRAND COUNTY—ROAD CONSTRUCTION, 1915.

GRAND COUNTY

PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
CONSOLIDATED	101.4	26 28 30 35	7.54 0.25 8.68 0.14	\$ 1,018.96	\$ 61.35	18 28 30 33 35	Shale Clay Clay Shale Shale	18 14 17 24 16	12 18 16 24 24	0.20 0.28 0.68 0.12 0.14	\$ 2,217.62	\$ 1,618.70
TOTAL	101.4		16.61	\$ 1,018.96	\$ 61.35					1.37	\$ 2,217.62	\$ 1,618.70

GRAND COUNTY

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GRAND COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
MOAB-CASTLETON	17.1											
MOAB-SAN JUAN	8.5											
MOAB-VALLEY CITY	25.5											
VALLEY CITY-COLORADO	53.4											
VALLEY CITY- GREEN RIVER	22.5	14	0.08	\$ 31.00	\$ 387.50							
TOTAL	127.0		0.08	\$ 31.00	\$ 387.50							

GRAND COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.

PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CONSOLIDATED	Court House Wash	Steel Truss	Concrete	100	16	Steel and Floor	\$6,790.60	Wood	1	8'x6'	18		
								Stone-Wood	1	4½'x3'	28		
								Stone	3	2'x2'	18	\$ 145.55	\$ 29.11
TOTAL							\$6,790.60		5			\$ 145.55	\$ 29.11

GRAND COUNTY

GRAND COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.													
ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
							\$2,049.92	Stone	1	20"x24"	18		
							1,236.54	Stone	1	24"x32"	14	\$ 79.78	\$ 28.89
							152.79	Wood	1	"	"	15.00	15.00
							\$3,439.25		3			\$ 94.78	\$ 31.59

*Dimensions not reported.

*Dimensions not reported.

4 12

GRAND COUNTY

(Grand No. 42.) Standard Steel Bridge under Construction over Court House
Wash near Moab. Span 100 ft.



(Grand No. 34.) Log Stringer Bridge over Pack Creek. Span 30 ft.

GRAND COUNTY

(Grand No. 46.) Interior View of Triple Span Steel Truss Bridge
over the Grand River at Moab. Total length 600 ft.

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TILDEN FOUNDATIONS

IRON COUNTY

At the beginning of the biennium there was the net sum of \$12,283.09 remaining in the State Road Fund available for use in Iron County. During the biennium the State appropriated \$9,464.29, the County appropriated \$4,732.14, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$5,306.39 by Special Road Tax Levy, making a total of \$31,904.83, which has been available for road construction. From this sum \$28,732.94* has been expended, leaving a net balance of \$3,171.89 on hand.

The greatest single stretch of road work accomplished in Iron County was that of the Parowan-Lund Road. The entire course was surveyed in the Spring of 1916. Construction in Hieroglyphic Canyon commenced in April and proceeded through May. The work encountered in the canyon amounted to about five miles. This work was done by tongue scrapers and fresnos. The remainder of the road, amounting to about thirty-five miles, was handled with tractors and graders in June, July and August. The full course of 40.6 miles was completed in September, of 1916. All of the work consisted of grading. No surfacing was done on this road during the biennium, but considerable will be necessary over the eight miles extending west from Parowan, and the ten miles extending east from Lund before the road is perfected. At a location about half-way between Parowan and Lund the road alignment runs through bad lands for about ten miles. The construction was very difficult over this stretch.

In April and May of 1915 about thirteen miles of road were graded from Buckhorn northwardly to the Beaver County line. This improvement, together with the work done on the road south of Beaver in Beaver County, completed the construction of the graded road between the two

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$26,753.13
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 2,358.02
	\$24,395.11
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 4,337.83
Total Expenditures during the Fourth Biennium.....	\$28,732.94

IRON COUNTY

County Seats. A stretch of three miles, leading from Parowan to Paragonah, was also graded in April of 1915, and constitutes a portion of the road mentioned.

At Enoch in June, 1916, one mile of the road was surfaced with shale. In May, 1916, a half mile of the road just north of Cedar City was surfaced with gravel. In January, 1915, and February, 1916, two and one-half miles of the road between Cedar City and Iron Springs were surfaced with gravel.

The following roads were officially designated as State roads on December 21, 1915; the road from Kanarra northwardly via Cedar City, Summit, Parowan, Paragonah and Buckhorn to the Beaver County line, and the road from Parowan westwardly via Little Salt Lake and Hieroglyphic Canyon to Lund.

In 1915 two inverted king-truss bridges with log stringers were constructed in Coal Creek Canyon east of Cedar City. Both bridges are about thirty-foot span parallel to the roadway and are constructed on a skew angle to the direction of the stream. The abutments are constructed of concrete, large rock from the site having been thrown into the forms along with the concrete, thereby giving the walls a greater density as well as reducing their cost. Each truss rod is suspended between two logs, forming an inverted king-truss. Four or five sets of trusses may be used in one bridge. This is a most economical form of bridge construction for small spans. Care must be given however to provide plenty of clearance for the truss rods, so that they will not catch the floating debris. Both of the bridges mentioned were provided with sixteen-foot roadways and wood railings extending to the extremities of the wing walls.

In the same year two reinforced concrete bridges were constructed, a sixteen-foot span at Paragonah and a nineteen-foot span at Fremont Wash. These bridges were constructed to the standard designs of the Commission, both having a roadway sixteen feet wide in the clear. No bridges were constructed in 1916.

Forty-three culverts were constructed in Iron County during the past biennium, twenty-three in 1915 and twenty in

IRON COUNTY

1916. Thirty-four of these culverts were constructed of corrugated iron pipe, while six were constructed of reinforced concrete, two of stone and one of wood.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Iron County during the past biennium, as will be noted in the accompanying tables.

IRON COUNTY**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS****IN
IRON COUNTY**

1915-1916.

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 2,175.54	
1915-1916 State Appropriations.....	9,464.29	
Motor Vehicle Fee Fund.....	118.92	\$11,758.75

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$ 1,800.00		
1915-1916 County Appropriations....	4,732.14		
Balance Road Tax on Hand Dec. 1,			
1914	10,665.57		
1915 State Road Tax Collections Date			
of Levy to April 1, 1916.....	5,092.84		
Additional Collections 1911 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	12.55		
Additional Collections 1912 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	28.19		
Additional Collections 1913 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	39.21		
Additional Collections 1914 State			
Road Tax Dec. 1, 1914.....	32.38		
Additional Collections 1914 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916	48.43		
Additional Collections 1915 State			
Road Tax April 1, 1916, to Dec. 1,			
1916	52.79	22,504.10	\$34,262.85

DISBURSEMENTS.

State Appropriation Fund.....	\$10,767.69	
County Appropriation Fund.....	3,691.25	
Special State Road Tax Levy.....	12,175.27	
Motor Vehicle Fee Fund.....	118.92	\$26,753.13
Gross Balance Dec. 1, 1916.....		\$ 7,509.72
Less Unpaid Labor and Purchases...		4,337.83
Net Balance Dec. 1, 1916.....		\$ 3,171.89

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 2,788,245.00	2	0.89	\$ 5,575.60
1916	5,997,113.00	1	0.51	5,596.60

IRON COUNTY

IRON COUNTY

IRON COUNTY

PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CEDAR	Coal Creek No. 1	Log Stringer (Skew)	Concrete	31	16	All but Floor	\$1,302.75	Cor. Iron	3	24"	10		
	Coal Creek No. 2	Log Stringer	Concrete	30	16	All	1,627.57					\$ 100.05	\$ 33.35
PARAGONAH	Paragonah Buckhorn	Concrete	Concrete	16	16	All	677.62	Cor. Iron Cor. Iron	4 8	12" 24"	22 20		
	Fremont Wash ..	Concrete	Concrete	20	16	All	1,551.35	Cor. Iron Concrete	4 2	36" 2'x1 1/4'	20 20	1,053.66	53.78
PAROWAN	Rush Lake Wash					Eng'g.	12. ■	Cor. iron Cor. Iron	1 1	24" 36"	20 20	130.75	65.37
									23			\$ 1,233.56	\$ 54.04
TOTAL							\$6,172.12						

IRON COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

*County material.
†Dimensions not reported.

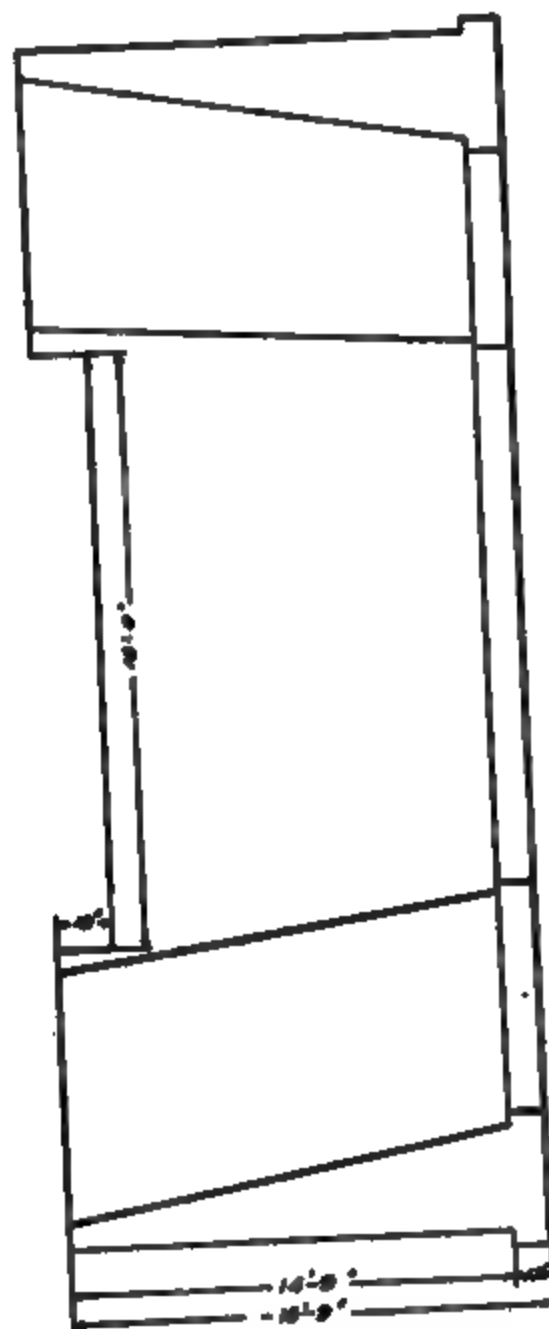
IRON COUNTY

IRON COUNTY

(Iron No. 7.) **Log Stringer Bridge with Crib Abutments over Cc
just East of Cedar City.**



(Iron No. 11.) **Inverted King Truss Bridge with Log Stringers.
Bridge No. 1. Span 30 ft.**



ELEVATION

Materials Actually Used
 Cement 92 bbls.
 Sand and Gravel 100 cu. yds.
 Rebars 36 cu. yds.

Concrete 1:2:5 Mix
 Total Volume 121 cu. yds.
 Cement 92 bbls.
 Sand 88 cu. yds.
 Gravel 33 "

NOTES
 Abutments to go down to good foundation.
 See Field Book 480 p. 28 for survey of site.
 Serial Number 8820

UTAH STATE ROAD COMMISSION
 CONCRETE ABUTMENTS
 COAL CREEK BRIDGE #2
 CEDAR PARCELS - ION CO.
 E. R. Morgan, State Road Engineer, Salt Lake City, Utah

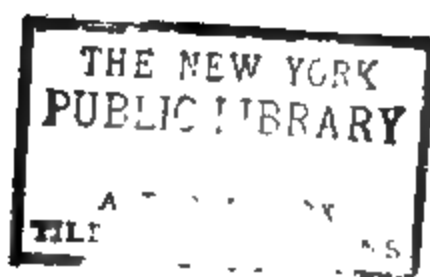
Designed by E. R. Morgan
 Drawn by J. W. ...
 Checked by J. W. ...

Scale - 1" = 1'
 Issued Oct 7, 1918
 From Salt Lake Office

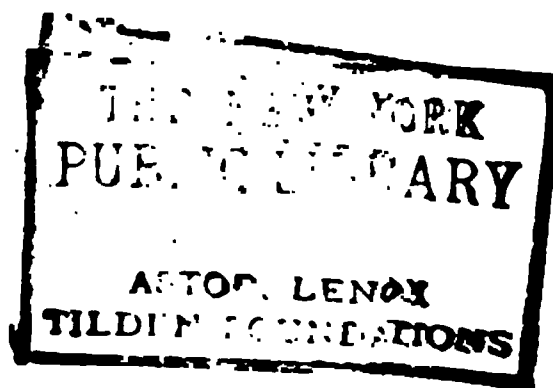
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JUAB COUNTY

At the beginning of the biennium there was the net sum of \$4,299.87 remaining in the State Road Fund available for use in Juab County. During the biennium the State appropriated \$11,064.29, the County appropriated \$11,164.29, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$10,257.50 by Special Road Tax Levy, making a total of \$36,904.87, which has been available for road construction. From this sum \$25,901.58* has been expended, leaving a net balance of \$11,003.29 on hand.

The following grading work was accomplished in Juab County during the biennium; about seven miles of the road from Tintic Junction northwestwardly to the Tooele County line graded in November and December of 1915, two and a half miles just south of Nephi graded in November, 1915, one-half mile just north of Nephi graded in November, 1915, about six miles of the road extending westwardly from Nephi to the Sanpete County line graded in June, July, August and September of 1916, two stretches of three miles each extending southwestwardly from Silver City graded in October and November of 1916, respectively, and fifteen miles of the road extending southwestwardly from the town of Levan graded in April and May of 1916.

The surfacing work accomplished during the biennium consists of the following; the three and one-half miles of road extending from Eureka to Silver City surfaced with limestone and quartzite in September, 1915, one and one-fourth miles at a location half-way between Mona and Santaquin surfaced with limestone gravel in November, 1915, one and a half miles just south of Mona surfaced with limestone gravel in November, 1915, one and one-third miles just north of Nephi surfaced with gravel in November and December, 1915, and November, 1916, three and three-fourths miles just south of

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$23,674.20</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 316.00</i>
	<i>\$23,358.20</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 2,543.38</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$25,901.58</i>

JUAB COUNTY

Nephi surfaced with gravel in October and November, 1915, and one mile just north of Levan surfaced with gravel in November, 1915.

During the past biennium the following roads were officially designated as State Roads: The road from Eureka to Tintic Junction, and the road from Eureka via Boulter Station to the Tooele County line were both designated November 22, 1915. The road from Levan north, via Nephi and Mona, toward Santaquin, to the Utah County line, was designated December 21, 1915. The road extending from Levan south to the Sanpete County line to connect with the road to Gunnison, was designated February 28, 1916. The road from Boulter station south along the Salt Lake Route, via Jericho to the Millard County line was designated March 13, 1916.

In 1915, fifteen corrugated iron pipe culverts were constructed in Eureka precinct. In 1916 the culvert construction work was much more extensive, a total of fifty-nine culverts having been constructed in that year as follows, thirty-five of reinforced concrete, twenty-two of corrugated iron pipe, one of concrete pipe and one of stone. No bridges were constructed in Juab County during the biennium.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Juab County during the past biennium, as will be noted in the accompanying tables.

JUAB COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS IN JUAB COUNTY 1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 122.04	
1915-1916 State Appropriations.....	11,064.29	
Motor Vehicle Fee Fund.....	118.92	\$11,305.25

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914 (\$1,893.97 plus \$71.00)	\$ 1,964.97*		
1915-1916 County Appropriations....	11,164.29		
Balance Road Tax on Hand Dec. 1, 1914	2,528.86		
1915 State Road Tax Collections Date of Levy to Dec. 1, 1916.....	2,658.32		
1916 State Road Tax Collections Date of Levy to Nov. 30, 1916.....	7,506.65		
Additional Collections 1911 State Road Tax Dec. 31, 1914, to Dec. 1, 1916	28.33		
Additional Collections 1912 State Road Tax Dec. 31, 1914, to June 30, 1915	3.87		
Additional Collections 1913 State Road Tax Dec. 31, 1914, to Dec. 1, 1916	60.33	25,915.62	\$37,220.87

DISBURSEMENTS.

State Appropriation Fund.....	\$ 9,542.81	
County Appropriation Fund....	8,837.62	
Special State Road Tax Levy..	5,174.85	
Motor Vehicle Fee Fund.....	118.92	\$23,674.20
gross Balance Dec. 1, 1916.....		\$13,546.67
less Unpaid Labor and Purchases...		2,543.38
net Balance Dec. 1, 1916.....		\$11,003.29

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 5,557,598.00	$\frac{1}{2}$	....	\$ 2,778.80
1916	11,363,303.00	1	0.01	11,363.29

*This balance was reported as \$1,893.97 by mistake at the end of the Third Biennial Report and was later corrected to read \$1,964.97. An apparent difference of \$71.00 therefore, exist between the Third and Fourth Biennial Reports for this County.

JUAB COUNTY

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JUAB COUNTY

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†Mileage not reported.

2021

2021

*Cost not segregated.

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JUAB COUNTY

JUAB COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
EUREKA								Cor. Iron	11	15"	21		
								Cor. Iron	2	24"	24		
								Cor. Iron	1	36"	26		
								Cor. Iron	1	48"	50	\$ 613.32	\$ 40.89
TOTAL									15			\$ 613.32	\$ 40.89

JUAB COUNTY

28

JUAB COUNTY

(Job No. 19.) **Steam Tractor and Grader Work on the Road between
Levan and Gunnison.**

(Job No. 20.) **Grading the Levan-Gunnison Road with a 12-ft. Blade Ditcher.**

KANE COUNTY

At the beginning of the biennium there was the net sum of \$11,604.48 remaining in the State Road Fund available for use in Kane County. During the biennium the State appropriated \$1,064.29, the County appropriated \$2,766.07, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$3,334.76 by Special Road Tax Levy, making a total of \$28,888.52 which has been available for road construction. From this sum \$18,535.76* has been expended, leaving a net balance of \$10,352.76 on hand.

The following grading work was accomplished in Kane County during the biennium; the two miles of road between Mount Carmel and Orderville graded in March, 1915, one-third mile in the town of Orderville graded in February, 1916, about two miles north of Glendale graded in June and July, 1916, two and two-tenths miles situated about six miles north of Kanab graded in March, April and May, 1916, and a stretch about three miles long situated about one-third the way between Mt. Carmel and Kanab graded in March and April, 1916. The labor on the one-third mile stretch constructed in the town of Orderville was contributed by the citizens of the town.

The surface work pursued during the biennium consists of the following; one-third mile just north of the town of Glendale surfaced with clay on sand in June, 1916, 300 feet in the town of Orderville surfaced with clay on sand in July, 1915, two and three-fourths miles of the road situated about one-third the distance between Mt. Carmel and Kanab surfaced with clay on sand in March and April, 1916, and two miles situated about six miles north of Kanab, surfaced with clay on sand in March and April, 1916.

The road between Mount Carmel and Kanab was officially designated as a State Road, on December 21, 1915.

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$17,356.58
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 730.04
	\$16,626.54
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 1,909.22
Total Expenditures during the Fourth Biennium.....	\$18,535.76

KANE COUNTY

A large wood-truss and wood-trestle structure was built over Johnsons Wash in the town of Johnson in 1915. The bridge is ninety-six feet long, having a forty-foot clear span over the main channel and a twenty-eight-foot trestle approach at each end. The middle span was built from the standard wood-truss details, while the approaches were specially designed. The trestle-bents are all resting on pile foundations as the underlying material is unfit for supporting masonry. Even now the bridge is endangered by the terrific washing and caving of the banks and bottom of the channel. The floods are enormous at times and the grade of the channel is quite steep. Preparation is therefore being made to protect the bridge from the erosion of the wash.

A wood-stringer bridge was constructed in 1915 at Black Rock in Johnson Precinct. The bridge has a span of thirty feet and is sixteen feet wide. The bridge is a temporary structure.

In 1916 a wood-truss bridge was constructed over the Virgin River on the Mt. Carmel-Gravel Springs Road. A thirty-foot truss was used, the span being about twenty-eight feet from face to face of abutments. One abutment was constructed a few years previous, while the other one was constructed in 1916. The abutments are of concrete. The superstructure is not of the standard State Road type, but was designed by the office in September, 1912.

Thirteen culverts were constructed in 1915 and fourteen in 1916. Thirteen are of wood, eight are of logs and five are of corrugated iron pipe and one is of stone and wood.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work was accomplished in Kane County during the past biennium, as will be noted in the accompanying tables.

KANE COUNTY

STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
KANE COUNTY
1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 4,123.99	
1915-1916 State Appropriations.....	11,064.29	
Motor Vehicle Fee Fund.....	118.92	\$15,307.20

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$ 1,062.40		-
1915-1916 County Appropriations.....	2,766.07		
Balance Road Tax on Hand Dec. 1,			
1914	7,148.13		
1915 State Road Tax Collections Date			
of Levy to Final Settlement.....	3,334.76	14,311.36	\$29,618.56

DISBURSEMENTS.

State Appropriation Fund	\$12,650.15	
County Appropriation Fund.....	1,278.47	
Special State Road Tax Levy.....	3,309.04	
Motor Vehicle Fee Fund.....	118.92	\$17,356.58

Gross Balance Dec. 1, 1916.....	\$12,261.98
Less Unpaid Labor and Purchases...	1,909.22

Net Balance Dec. 1, 1916.....	\$10,352.76
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STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 703,280.00	5	0.93	\$ 3,515.47
1916	1,261,771.00.....	2	0.33	2,523.21

KANE COUNTY

KANE COUNTY—ROAD CONSTRUCTION, 1915.												
PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	
ALTON	4.6											
GLENDALE	25.8											
JOHNSON	6.5											
KANAB	46.2											
MT. CARMEL	14.5	20	0.70	\$ 208.83	\$ 298.93							
ORDERVILLE	22.5	20	1.30	439.56	338.11	20	Clay	10	9	0.06	8.96	\$ 149.33
TOTAL	120.1		2.00	\$ 648.39	\$ 324.19					0.06	8.96	\$ 149.33

KANE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.

*Dimensions not reported.
†Cost not segregated.

KANE COUNTY

KANE COUNTY

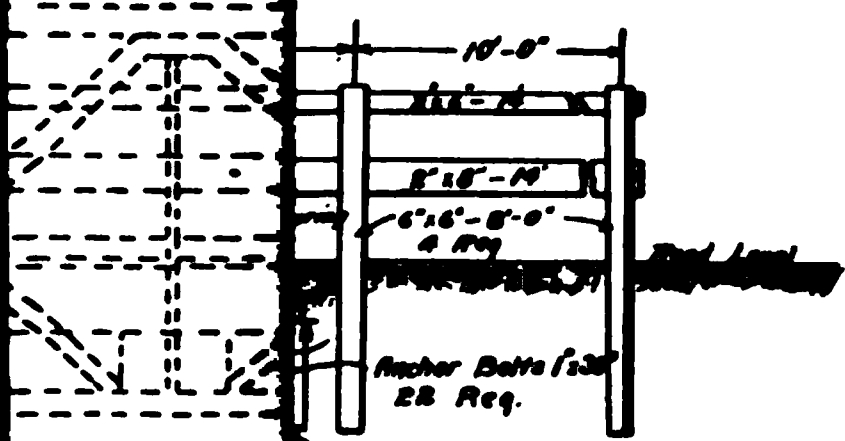
Kane No. 48.) Construction of Sand-Clay Road between Mt. Carmel and Kanab.

**Kane No. 55.) Johnson's Wash Bridge, Showing Willow and Earth Filling being
Constructed to Prevent Flood Washing.**

KANE COUNTY

(Kane No. 49.) Proposed Bridge Site over Kanab Creek on the
Mt. Carmel-Kanab Road.

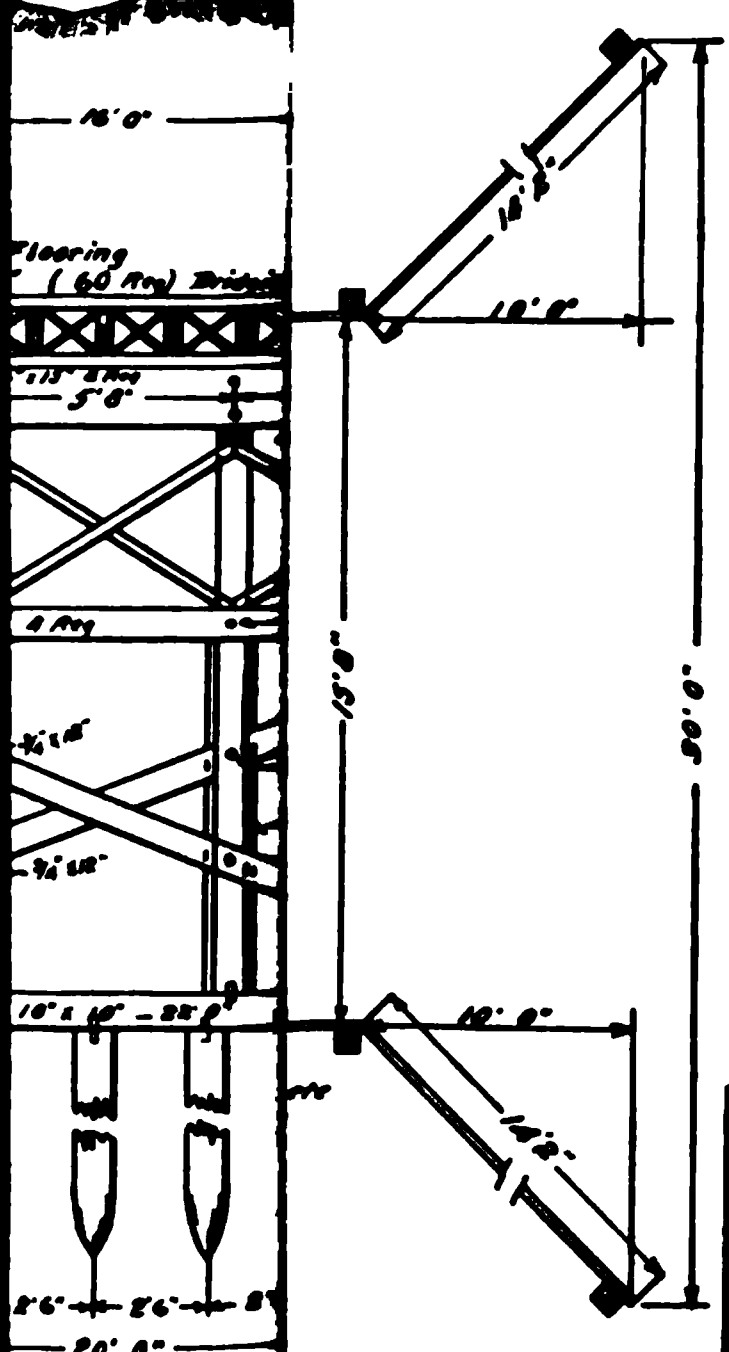
(Kane No. 33.) General View of Plateaus Requiring Sand-Clay Road Constructio



39' 0"

40' 0"

96' 0"



2'-6" 2'-6" 8'

20' 0"

ELEVATION

UTAH STATE ROAD COMMISSION WOOD TREESTLE FOR JOHNSON'S WASH BRIDGE JOHNSON, PRINCIPAL ENGINEER S. B. PETERSON, State Road Engineer.	
Designed by: J. H. H. Drawn by: J. H. H. Checked by: J. H. H.	Date: 1/1/1917 Scale: 1/4" = 1'-0" From: State Road 101
<h1>A-57</h1>	

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ASTOR LENOX
TILDEN FOUNDATIONS

MILLARD COUNTY

At the beginning of the biennium there was the net sum of \$2,365.65 remaining in the State Road Fund available for use in Millard County. During the biennium the State appropriated \$9,464.29, the County appropriated \$4,732.14, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$16,480.18 by Special Road Tax Levy, making a total of \$33,161.18, which has been available for road construction. From this sum \$26,178.20* has been expended, leaving a net balance of \$6,982.98 on hand.

The grading work accomplished in 1915 consists of the following stretches; one and one-third miles just north of Meadow graded in October, seven and one-third miles just west of Kanosh graded in November, and a small stretch of a thousand feet about half way between Holden and Scipio graded in November and December. The grading of the Delta-Hawbush road was commenced in November, 1915, in which month three miles were completed from Hawbush north. Eight miles were added in December, 1915.

The grading of the Delta-Hawbush Road was completed in 1916, when in April eight miles were graded and in September the remaining three miles, thereby finishing the work to the town of Delta. The other grading work accomplished in 1916 consists of the following; three miles extending northeastwardly from Delta graded in September, the six miles extending northeastwardly from Scipio to the Juab line, and the three miles extending southwestwardly from Scipio graded in September and October, four and one-half miles of the road extending northwestwardly from Fillmore graded in October and November, and one and three-fourths miles in the town of Holden graded in November.

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$27,094.26
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 6,004.72
	<u>\$21,089.54</u>
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 5,088.66
Total Expenditures during the Fourth Biennium.....	<u>\$26,178.20</u>

MILLARD COUNTY

The following roads were officially designated as State Roads during the past biennium: The road extending east from Delta for about ten miles thence in a southerly direction to intersect with the Oasis-Holden Road at the Hawbush Bridge, and the road extending west from Delta and thence northwardly through the North Tract of the Delta Land and Water Companies' project, to a point near the north line of said tract, were both designated May 24, 1915. The road from Cove Fort south to the Beaver County line was designated December 21, 1915. The road from Fillmore north along the west side of Cedar Mountains to intersect with the present State Road between Hawbush and Holden was designated August 17, 1916. The road extending northeastwardly from Delta to Lynndyl was designated November 10, 1916.

The Hawbush Wash bridge, a log-stringer structure of eight-foot span was constructed on the Oasis-Holden Road in 1915. On the road from Holden to Scipio, a reinforced concrete culvert-bridge of twelve-foot span was constructed in 1914, and in 1915 the approaches were filled and graded. The waterway is fifty feet long, and there is a fill of eight-foot depth over the top of the slab.

A special design was made for the skew-span concrete bridge over Chalk Creek in the city of Fillmore. This bridge has a span of 31 feet parallel to the roadway, and it has a clear width of roadway of twenty feet. The concrete railings are used as girders in addition to the T-beam girders underneath the slab. The structure was constructed in 1916. A cut of the design is submitted herewith.

One hundred culverts were constructed in Millard County during the biennium, thirty-five in 1915 and sixty-five in 1916. Sixty-nine of the culverts mentioned were constructed of corrugated iron pipe while thirty of the larger sized culverts were constructed of reinforced concrete, and one culvert was constructed of concrete pipe.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Millard County during the past biennium, as will be noted in the accompanying tables.

MILLARD COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
MILLARD COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 1,034.30	
1915-1916 State Appropriations.....	9,464.29	
Motor Vehicle Fee Fund.....	118.92	\$10,617.51

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ 1,888.28		
1915-1916 County Appropriations....	4,732.14		
Balance Road Tax on Hand Dec. 1, 1914	5,447.79		
1915 State Road Tax Collections Date of Levy to March 1, 1916.....	16,251.14		
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	71.27		
Additional Collections 1915 State Road Tax March 1, 1916, to Dec. 1, 1916	157.77	28,548.39	\$39,165.90

DISBURSEMENTS.

State Appropriation Fund.....	\$ 6,737.44	
County Appropriation Fund.....	4,075.76	
Special State Road Tax Levy.....	16,162.14	
Motor Vehicle Fee Fund.....	118.92	\$27,094.26
Gross Balance Dec. 1, 1916.....		\$12,071.64
Less Unpaid Labor and Purchases...		5,088.66
Net Balance Dec. 1, 1916.....		\$ 6,982.98

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 3,511,698.00	5	....	\$17,558.49
1916	11,631,736.00	1	....	11,631.73

MILLARD COUNTY

MILLARD COUNTY—ROAD CONSTRUCTION, 1915.

PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	
DESERET	4.0											
FILLMORE	8.3											
HATTON	3.0											
HINCKLEY	15.5											
HOLDEN	29.7	24	3.00	\$ 1,333.75	\$ 444.56							
KANOSH	26.8	30	2.79	2,343.06	321.41							
		40	4.50									
MEADOW	7.2	30	1.31	630.75	481.49							
OASIS	23.2											
SCIPIO	24.3	24	0.04	41.00	1,025.00							
TOTAL	142.0		11.64	\$ 4,348.56	\$ 873.07							

MILLARD COUNTY

MILLARD COUNTY

MILLARD COUNTY—ROAD CONSTRUCTION, 1915.

MILLARD COUNTY—ROAD CONSTRUCTION, 1915.												
PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
DESERET	4.0											
FILLMORE	8.3											
HATTON	3.0											
HINCKLEY	15.5											
HOLDEN	29.7	24	3.00	\$ 1,333.75	\$ 444.56							
KANOSH	26.8	30	2.79	2,343.06	321.41							
		40	4.50									
MEADOW	7.2	30	1.31	630.75	481.49							
OASIS	23.2											
SCIPIO	24.3	24	0.04	41.00	1,025.00							
TOTAL	142.0		11.64	\$ 4,348.56	\$ 373.07							

MILLARD COUNTY

ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
DELTA-HAWBUSH								Cor. Iron	20	12"	24		
								Cor. Iron	1	18"	24	\$ 291.91	\$ 13.27
								Cor. Iron	1	24"	24		0.73
FILLMORE-CEDAR MT.								Con. Pipe	1	6"	8		
FILLMORE-HOLDEN	Fillmore	Concrete Girder (Skew)	Concrete	31	16	All	\$1,669.78	Cor. Iron	1	12"	20	1.00	1.00
HOLDEN-SCIPIO								Cor. Iron	3	8"	26		
								Cor. Iron	7	10"	24		
								Cor. Iron	20	12"	24		
								Cor. Iron	8	18"	24		
								Cor. Iron	2	24"	24	1,174.91	29.37
OASIS-HINCKLEY								Concrete	1	3'x2'	40	42.83	42.83
TOTAL							\$1,669.78		65			\$ 1,511.28	\$ 23.25

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MORGAN COUNTY

At the beginning of the biennium there was the net sum of \$6,107.51 remaining in the State Road Fund available for use in Morgan County. During the biennium the State appropriated \$9,464.29, the County appropriated \$2,366.07, the Motor Vehicle Fee Fund amounted to \$118.93, and the County raised \$4,863.03 by Special Road Tax Levy, making a total of \$22,919.83, which has been available for road construction. From this sum \$22,627.37* has been expended, leaving a net balance of \$292.46 on hand.

The grading work done in Morgan County during the fourth biennium is as follows; two miles of the road situated about half-way between Morgan and Peterson, graded in May, June, August and November of 1916, one and one-half miles running through the town of Peterson graded in May and June, 1916, one-half mile northwest of Peterson graded in December, 1915, one-half mile at Devils Slide graded in June, 1915, and a small stretch of 1,000 feet between Devils Slide and Croyden graded in June, 1916.

The road surfacing accomplished during the biennium is as follows; one mile extending northwestwardly from Morgan City surfaced with shale in June and July of 1916, one and one-half miles in the town of Croyden surfaced with shale in December, 1914, one-half mile at Devils Slide surfaced with shale in June, 1915, three-fourths of a mile situated about halfway between Morgan and Peterson surfaced with shale in June and September, 1916, and a stretch of two miles extending northwestwardly from Peterson surfaced with shale in June and July of 1916.

The road from Devils Slide to Henefer by way of the Weber River Narrows was designated as a State Road, May 3, 1915. The road from Peterson to North Morgan by way of Enterprise and Stoddard was designated June 26, 1916.

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$19,842.93</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 3,444.80</i>
	<i>\$16,398.63</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 6,228.74</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$22,627.37</i>

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ASTOR, LENOX
TILDEN FOUNDATIONS

MORGAN COUNTY

At the beginning of the biennium there was the net sum of \$6,107.51 remaining in the State Road Fund available for use in Morgan County. During the biennium the State appropriated \$9,464.29, the County appropriated \$2,366.07, the Motor Vehicle Fee Fund amounted to \$118.93, and the County raised \$4,863.03 by Special Road Tax Levy, making a total of \$22,919.83, which has been available for road construction. From this sum \$22,627.37* has been expended, leaving a net balance of \$292.46 on hand.

The grading work done in Morgan County during the fourth biennium is as follows; two miles of the road situated about half-way between Morgan and Peterson, graded in May, June, August and November of 1916, one and one-half miles running through the town of Peterson graded in May and June, 1916, one-half mile northwest of Peterson graded in December, 1915, one-half mile at Devils Slide graded in June, 1915, and a small stretch of 1,000 feet between Devils Slide and Croyden graded in June, 1916.

The road surfacing accomplished during the biennium is as follows; one mile extending northwestwardly from Morgan City surfaced with shale in June and July of 1916, one and one-half miles in the town of Croyden surfaced with shale in December, 1914, one-half mile at Devils Slide surfaced with shale in June, 1915, three-fourths of a mile situated about halfway between Morgan and Peterson surfaced with shale in June and September, 1916, and a stretch of two miles extending northwestwardly from Peterson surfaced with shale in June and July of 1916.

The road from Devils Slide to Henefer by way of the Weber River Narrows was designated as a State Road, May 3, 1915. The road from Peterson to North Morgan by way of Enterprise and Stoddard was designated June 26, 1916.

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$19,842.98</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 3,444.80</i>
	<i>\$16,398.63</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 6,228.74</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$22,627.37</i>

MORGAN COUNTY

Several bridges were constructed in Morgan County during the past biennium. In 1915 a reinforced concrete slab bridge of sixteen-foot span was constructed over Line Creek in Milton Precinct, and in the same year a concrete-girder bridge of twenty-seven-foot span was constructed over Dry Creek in Peterson precinct. Both bridges have a sixteen-foot clear roadway. In 1916, a concrete-girder bridge of thirty-five-foot span was constructed over Lost Creek on the Devils Slide-Croyden Road. A concrete-slab bridge of eleven-foot span was constructed over Cottonwood Creek just west of Devils Slide. This bridge has a clear width of roadway of sixteen feet.

Fifty-eight culverts were constructed in Morgan County during the past biennium, fourteen in 1915 and forty-four in 1916. Fifty-three of the culverts mentioned are of reinforced concrete, four of corrugated iron and one of stone with wood top.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Morgan County during the past biennium, as will be noted in the accompanying tables.

MORGAN COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
MORGAN COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	346.51	
1915-1916 State Appropriations.....		9,464.29	
Motor Vehicle Fee Fund.....		118.93	\$ 9,929.73

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$	89.52		
1915-1916 County Appropriations....		2,366.07		
Balance Road Tax on Hand Dec. 1, 1914		9,115.78		
1915 State Road Tax Collections Date of Levy to Nov. 30, 1916.....		4,673.74		
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		5.45		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		183.84	16,434.40	\$26,364.13

DISBURSEMENTS.

State Appropriation Fund.....	\$	9,742.21	
County Appropriation Fund.....		1,162.49	
Special State Road Tax Levy.....		8,819.30	
Motor Vehicle Fee Fund.....		118.93	\$19,842.93
Gross Balance Dec. 1, 1916.....			\$ 6,521.20
Less Unpaid Labor and Purchases...			6,228.74
Net Balance Dec. 1, 1916.....			\$ 292.46

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 1,874,963.00	2½	0.05	\$ 4,687.35
1916	4,532,851.00	1	0.10	4,532.75

MORGAN COUNTY

MORGAN COUNTY

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MORGAN COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CANYON CREEK								Concrete	1	3'x1½'	35		
								Cor. Iron	1	8"	20	\$ 136.44	\$ 45.48
								Cor. Iron	1	16"	18		
CROYDEN								Concrete	1	•	•	43.91	43.91
MILTON	Line Creek	Concrete Slab	Concrete	16	16	All	\$ 689.13						
MORGAN								Concrete	1	4'x4'	45	70.28	70.28
PETERSON	Dry Creek	Concrete Girder (Skew)	Concrete	27	16	All	1,269.41	Concrete	7	2'x2' 15"	20	305.67	33.96
								Cor. Iron	2		24		
TOTAL							\$1,958.54		14			\$ 556.30	\$ 39.74

*Dimensions not reported.

MORGAN COUNTY

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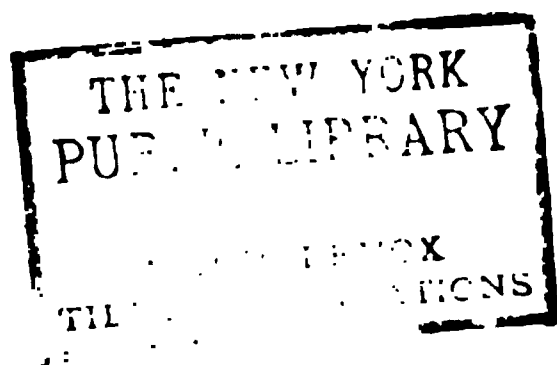
MORGAN COUNTY

No. 9.) State Road Approaching Croyden from the Summit Co. Line.

**No. 20.) End View of Peterson Bridge, Showing Log Crib Abutment
to be Replaced by Concrete.**

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PIUTE COUNTY

At the beginning of the biennium there was the net sum of \$9,271.49 remaining in the State Road Fund available for use in Piute County. During the biennium the State appropriated \$9,464.29, the County appropriated \$2,366.07, the Motor Vehicle Fee Fund amounted to \$118.93, and the County raised \$2,433.02 by Special Road Tax Levy, making a total of \$23,653.80, which has been available for road construction. From this sum \$18,637.16* has been expended, leaving a net balance of \$5,016.64 on hand.

In May and June of 1915 about five miles of the road between Junction and Circleville was graded. Half of this work, amounting to about two and one-half miles, was surfaced with gravel. One mile of the road just north of Junction was also surfaced during the biennium.

In December, 1915, about four miles of the road just south of Marysvale was surfaced with gravel. In June of 1915, about one-half mile of road was graded at Kingston. During the Summer of 1915, a new road was constructed around "Steen Hill," thereby eliminating the steepest and roughest piece of road up the East Fork of the Sevier River. This work had been proposed for a long time and had been attempted by the County, but, on account of lack of funds, had been discontinued. The road change is about one mile long, half of which is in rock cut, the remainder being rock or gravel fills and dugways in gravel and hardpan. Owing to the coarse material used in the construction, the roadway was surfaced throughout with volcanic cinders. The large amount of rock work necessary made the road very expensive.

In June, 1915, a mile stretch of the Loa-Burrville road was graded, and in October of the same year a small stretch about one-third of a mile long was graded just south of Marysvale.

EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$18,975.20
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 1,514.51
	\$17,460.69
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$ 1,176.47
Total Expenditures during the Fourth Biennium.....	\$18,637.16

PIUTE COUNTY

The route between Junction and Circleville, known as the Whitaker lane was officially designated as a State Road, May 3, 1915. The road from Circleville south to the Piute County line, and the road from Junction to Kingston were designated as State Roads December 21, 1915.

There were twenty-four culverts constructed in Piute County during the past biennium, twenty-one in 1915 and three in 1916. Twenty-one were constructed of corrugated iron pipe, two of reinforced concrete and one of wood. No bridges were constructed in Piute County during the past biennium.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Piute County during the past biennium, as will be noted in the accompanying tables.

PIUTE COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
PIUTE COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 4,973.84	
1915-1916 State Appropriations.....	9,464.29	
Motor Vehicle Fee Fund.....	118.93	\$14,557.06

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$ 1,800.00		
1915-1916 County Appropriations....	2,366.07		
Balance Road Tax on Hand Dec. 1,			
1914	4,012.16		
1915 State Road Tax Collections Date			
of Levy to Final Settlement.....	2,433.02	10,611.25	\$25,168.31

DISBURSEMENTS.

State Appropriation Fund.....	\$10,181.35	
County Appropriation Fund.....	2,896.18	
Special State Road Tax Levy.....	5,778.74	
Motor Vehicle Fee Fund.....	118.93	\$18,975.20
Gross Balance Dec. 1, 1916.....		\$ 6,193.11
Less Unpaid Labor and Purchases...		1,176.47
Net Balance Dec. 1, 1916.....		\$ 5,016.64

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 677,138.00	4	0.28	\$ 2,708.27
1916	1,941,332.00	2	1.54	3,881.12

PIUTE COUNTY

PIUTE COUNTY—ROAD CONSTRUCTION, 1915.

PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
BULLION	6.6											
CIRCLEVILLE	8.0	24	3.13	\$ 1,493.33	\$ 477.10	30	Sand and Gravel	14	5	1.31	\$ 1,821.45	\$ 1,389.66
JUNCTION	11.2	30	0.89	184.14	206.89	20	Gravel	16	7	0.55	1,449.41	929.11
						30	Gravel	14	6	0.11		
						30	Gravel	16	15	0.20		
						30	Gravel	20	12	0.70		
KINGSTON	17.6	16 18	0.63 1.78	5,324.85	2,209.48	18	Gravel	18	6	0.83	*	
MARYSVALE	6.2	20	0.28	289.98	1,035.64							
TOTAL	49.6		6.73	\$ 7,292.30	\$ 1,083.55					3.70	\$ 3,270.86	\$ 884.02

*Cost not segregated.

PIUTE COUNTY

PIUTE COUNTY—ROAD CONSTRUCTION, 1916.												
ROAD	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	
JUNCTION-CIRCLEVILLE	11.2					20 62	Gravel Gravel	16 20	10 8	0.04 0.26	\$ 168.66 \$ 562.20	
JUNCTION-COYOTO	15.6											
JUNCTION-MARYSVALE	14.8					30 62	Gravel Gravel	16 20	8 8	3.80 0.24	614.43 152.09	
LOA-BURRVILLE	3.0											
MARYSVALE-SEVIER	5.0											
TOTAL	49.6									4.34	\$ 783.09 \$ 180.44	

PIUTE COUNTY

PIUTE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CIRCLEVILLE								Cor. Iron	2	15"	12		
								Cor. Iron	2	24"	24		
								Concrete	1	8'x2'	26		
								Concrete	1	4'x3'	24	\$ 355.72	\$ 59.29
JUNCTION								Cor. Iron	9	15"	26		
								Cor. Iron	1	24"	6	318.22	31.82
KINGSTON								Cor. Iron	1	15"	25		
								Cor. Iron	3	24"	22	316.39	79.10
MARYSVALE								Cor. Iron	1	15"	24	25.12	25.12
TOTAL									21			\$ 1,015.45	\$ 48.35

PIUTE COUNTY

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ROAD	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
JUNCTION-MARYSVALE								Wood	1	12"x12"	20	\$ 22.30	\$ 22.30
LOA-BURRVILLE								Cor. Iron	2	12"	16	55.13	27.56
TOTAL									3			\$ 77.43	\$ 26.81

PIUTE COUNTY

(Piute No. 5.) Piute Reservoir near the State Road between Marysvale and Junction.

(Piute No. 11.) Gravel Surface State Road near Junction.

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RICH COUNTY

At the beginning of the biennium there was the net sum of \$1,281.75 remaining in the State Road Fund available for use in Rich County. During the biennium the State appropriated \$11,064.29, the County appropriated \$2,766.07, the Motor Vehicle Fee Fund amounted to \$118.93, and the County raised \$3,963.34 by Special Road Tax Levy, making a total of \$19,194.38, which has been available for road construction. From this sum \$21,852.45* has been expended, leaving a deficit of \$2,658.07.

The work of grading the roads in Rich County during the fourth biennium resulted in the following progress; one mile extending west from Garden City and one-half mile extending south from the same point graded in June, 1916, three miles between Garden City and the Cache National Forest graded in August, 1915, one-half mile situated three miles northwest of Laketown, graded in June, 1916, one-third mile in Laketown graded in October, 1915, one-half mile at the head of Old Canyon graded in June, 1915, four and one-fourth miles extending from the Sage Creek junction eastwardly to the Wyoming line graded in October, 1915, two stretches of one-half mile each situated north of Randolph graded in June, 1915, one stretch two-thirds of a mile long just north of Randolph graded in September, 1916, two and one-half miles between Argyle and Woodruff graded in May, 1915, and a small stretch about one-third mile long south of Woodruff graded in June, 1916.

The surfacing work which was done in the county during the past two years is comprised of the following; 900 feet in Garden City surfaced with gravel in June, 1916, two small stretches of 900 feet and 1,300 feet lying between Laketown and Garden City surfaced with gravel in October and November, 1916, one-half mile in Laketown surfaced with gravel in

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$17,192.88</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 1,048.26</i>
	<i>\$16,149.12</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 5,703.33</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$21,852.45</i>

RICH COUNTY

October, 1915, two miles extending westwardly from the Sage Creek road junction surfaced with gravel in October, 1916, one mile of the road extending eastwardly from the same point surfaced with red soil in October, 1915, one-half mile halfway between Sage Creek and Randolph surfaced partly with red soil and partly with gravel in October, 1915, and September, 1916, respectively, one and one-fourth miles just north of Randolph surfaced with gravel in October, 1916, one mile at Argyle surfaced with gravel in October and November, 1916, and one-half mile just north of Woodruff and one-half mile just south of Woodruff surfaced with gravel in November, 1915, and November, 1916, respectively.

On the State Road leading westwardly from Garden City into Cache County, three and one-half miles included within the Cache National Forest were graded by the U. S. Forest Service in 1915. An expenditure of \$247.22 was made by the Government for the survey and \$2,306.60 for the construction.

The following roads were officially designated as State Roads during the past biennium: The road extending from Garden City westwardly to the Cache County line was designated December 12, 1914. The road extending from Skank's Ranch on Sage Creek eastwardly to the Wyoming line was designated May 24, 1915. The road from Randolph south via Woodruff and thence southeastwardly to the Wyoming line to connect with the road from Evanston, Wyoming, was designated December 21, 1915. The road extending from Laketown around the west shore of Bear Lake, via Garden City to the Idaho line, was also designated December 21, 1915.

The old steel-truss bridge over the Bear river near Randolph was repaired in 1915. This bridge is an old railroad bridge of the through-truss type and is 156 feet in span. The west abutment built of stone was settling and crumbling under the heavy load, and was therefore completely replaced with concrete. The east abutment was repaired and refaced with concrete. The number of stringers was doubled in the bridge floor and the flooring was all replaced. The scaled or scarred portions of the steel frame were touched up with

RICH COUNTY

red lead paint, after which the whole steel superstructure was painted with dark olive paint.

The concrete abutments for Jackson's bridge, a log-stringer structure of twenty-two-foot span, were also constructed in 1915. This bridge is a few miles northeast of Randolph, over the Randolph-Woodruff Canal extension. In the following year the wood superstructure of this bridge was constructed.

In 1916 several small bridges were constructed throughout the county. Henderson's bridge near Laketown was constructed of log stringers and has a span of thirteen feet. The South Woodruff bridge over Twelve Mile Creek is a concrete-slab bridge of fifteen-foot-span. The Argyle Canal bridge at Argyle was constructed of log stringers on concrete abutments. This bridge has a concrete pier in the middle of the channel and is constructed at a skew angle. The two spans are each twenty feet long and the roadway is sixteen feet wide. Otter Creek bridge, located about three miles north of Randolph was constructed of concrete abutments and a reinforced concrete-slab span of sixteen feet. Hodge Ditch bridge near Garden City was constructed of wood on concrete abutments. The span is thirteen feet. The Garden City Canal bridge, constructed near Garden City is of the same type and span as the Hodge Ditch bridge.

Forty-four culverts were constructed in Rich County during the past biennium, eighteen in 1915, and twenty-six in 1916. Forty-two were of corrugated iron pipe, one of reinforced concrete and one of logs.

Considerable repair and maintenance of roads, bridges and culverts, also some railings, retaining walls and other miscellaneous work was accomplished in Rich County during the biennium.

RICH COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS

IN

RICH COUNTY
1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 278.84	
1915-1916 State Appropriations.....	11,064.29	
Motor Vehicle Fee Fund.....	118.93	\$11,462.06

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ 102.68		
1915-1916 County Appropriations....	2,766.07		
Balance Road Tax on Hand Dec. 1, 1914	1,943.49		
1915 State Road Tax Collections Date of Levy to Jan. 1, 1916.....	3,775.27		
Additional Collections 1911 State Road Tax July 1, 1913, to Dec. 1, 1916	13.99		
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	11.83		
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	13.11		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	129.38		
Additional Collections 1915 State Road Tax Jan. 1, 1916, to Dec. 1, 1916	19.76	8,775.58	\$20,237.64

DISBURSEMENTS.

State Appropriation Fund.....	\$ 9,715.60	
County Appropriation Fund.....	1,930.63	
Special State Road Tax Levy.....	5,427.22	
Motor Vehicle Fee Fund.....	118.93	\$17,192.38
Gross Balance Dec. 1, 1916.....		\$ 3,045.26
Less Unpaid Labor and Purchases...		5,703.33
*Deficit December 1, 1916.....		\$ 2,658.07

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 1,410,832.00	3	....	\$ 4,232.49
1916	2,301,372.00	1½	1.21	3,450.84

*Deficit covered by 1916 State Road Tax collections, report of which not received prior to Dec. 1, 1916.

RICH COUNTY—ROAD CONSTRUCTION, 1915.

RICH COUNTY

PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
ARGYLE	7.5	24	2.44	\$ 473.65	\$ 194.12							
GARDEN CITY	16.9	16	3.00	1,939.74	646.58							
LAKE TOWN	9.1	24	0.53	638.78	701.95		Gravel	18	10	0.38	•	
		30	0.38									
RANDOLPH	17.8	24	5.18	1,108.87	214.07		Red Soil Red Soil	18 18	30 36	1.00 0.12	\$ 251.70	\$ 224.73
WOODRUFF	18.1	30	0.61	670.95	1,099.92		Gravel	18	8	0.60	640.89	1,068.15
TOTAL	69.5		12.14	\$ 4,831.99	\$ 398.02					2.10	\$ 892.59	\$ 425.04

*Cost not segregated.

RICH COUNTY

RICH COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	Miles of State Road Designated	ROAD GRADED			ROAD SURFACED							
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
EVANSTON-SUMMIT	5.0											
GARDEN CITY-CACHE	6.0	24	1.00	\$ 238.75	\$ 238.75							
GARDEN CITY-IDAHO	4.2					24	Gravel	16	8	0.17	†	
GARDEN CITY-LAKETOWN	10.8	24	1.00	482.69	482.69	24	Gravel Gravel	16 12	8 8	0.06 0.41	\$ 271.60	\$ 577.87
LAKETOWN-SAGE CREEK	13.5	*	*	484.71		24	Gravel	12	6	2.14	35.75	16.71
RANDOLPH-EVANSTON	22.2	30	0.30	88.14	293.80	30	Gravel	11	8	1.98	2,027.82	1,024.15
RANDOLPH-SAGE CREEK	7.8	30	0.63	48.75	77.38	30	Gravel	12	10	1.50	1,023.94	682.63
SAGE CREEK-WYOMING	4.5					24	Gravel Clay	24 24	6 6	0.23 0.17	310.36	775.90
TOTAL	74.0		2.93	\$ 1,343.04	\$ 458.48					6.65	\$ 3,669.47	\$ 551.80

*Mileage not reported.

†Cost not segregated.

RICH COUNTY

PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
ARGYLE								Cor. Iron	2	12"	20	\$ 64.27	\$ 21.42
GARDEN CITY								Cor. Iron	1	16"	20		
								Cor. Iron	4	15"	24	175.48	29.25
LAKETOWN								Cor. Iron	2	18"	24		
								Cor. Iron	1	12"	24	49.68	24.84
RANDOLPH								Cor. Iron	1	15"	24		
	Bear River	Steel Truss	Concrete	156	16	Abutment Replaced and Repaired	\$1,891.36	Cor. Iron	1	24"	24		
WOODRUFF								Log	1	*	*	51.88	25.94
	Jackson's	Concrete	Concrete	22	16	Abutments	141.10	Cor. Iron	1	12"	22		
								Cor. Iron	3	18"	17		
								Cor. Iron	1	24"	30	156.75	31.35
TOTAL							\$2,032.46		18			\$ 498.06	\$ 27.67

•Dimensions not reported.

*Dimensions not reported.

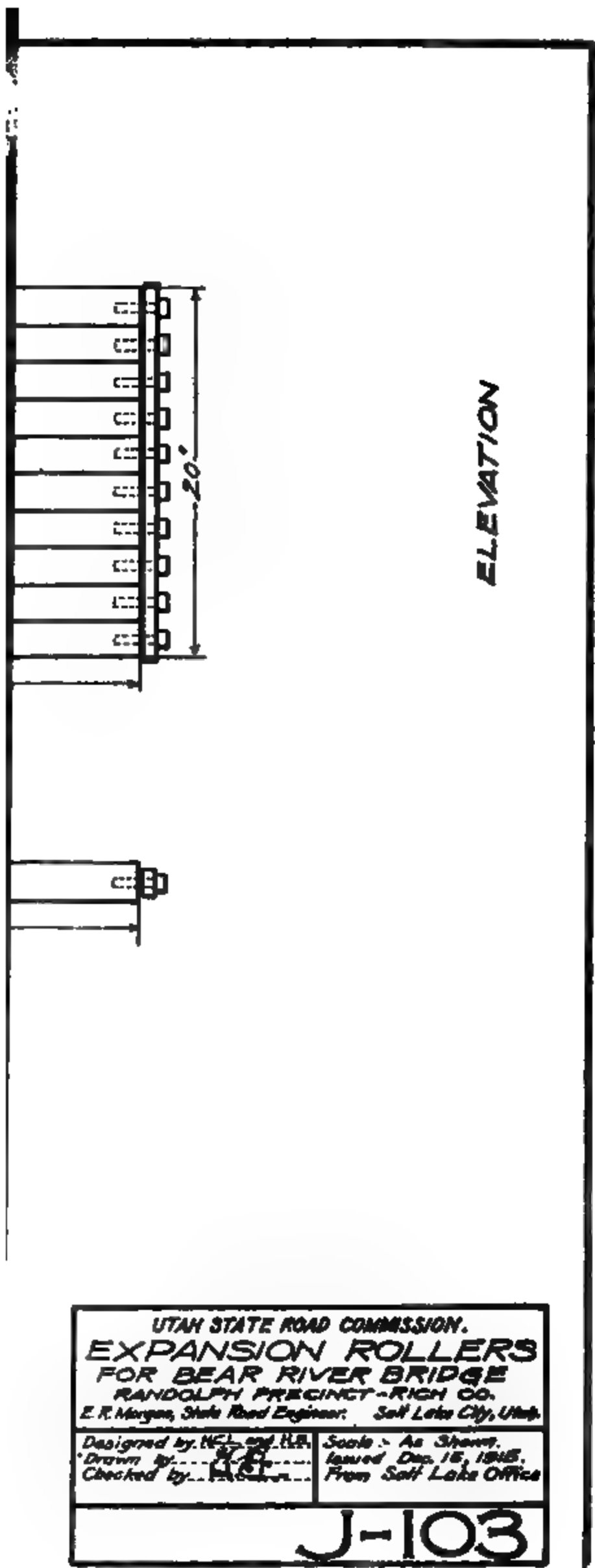
RICH COUNTY

RICH COUNTY

(Rich No. 2.) End of Bear River Bridge, Showing Crumbling Masonry Abutment
Since Replaced with Concrete.



(Rich No. 3.) Full View of Bear River Steel Bridge. Span 156 ft.

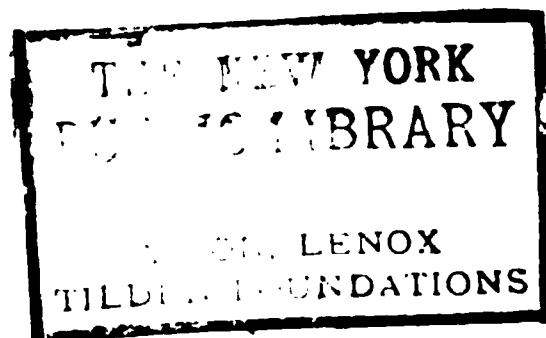


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SALT LAKE COUNTY

At the beginning of the biennium there was the net sum of \$18,076.71 remaining in the State Road Fund available for use in Salt Lake County. During the biennium the State appropriated \$9,464.29, the County appropriated \$11,198.68, the city of Murray appropriated \$4,000.00, the Motor Vehicle Fee Fund amounted to \$118.93, and the County raised \$227,723.23, by Special Road Tax Levy, making a total of \$270,581.84, which has been available for road construction. From this sum \$333,964.16* has been expended, leaving a deficit of \$63,382.32.

The principal grading work accomplished in Salt Lake County during the past biennium is that which was done as a preliminary step to the concrete surfacing work. This grading work amounted to about two and one-half miles in 1915, and to fourteen and one-half miles in 1916. About five miles of the Parley's Canyon Road extending from the summit westwardly were graded in June, July, August and September of 1916. A small stretch of about one-half mile was also graded at a point about two and one-half miles within the mouth of Parley's Canyon in August, 1916, a one-half mile stretch between Sandy and Draper was graded in June, 1915, and a half mile between Draper and the Utah County line was graded in October, 1915.

A relocation of the Parley's Canyon Road from 21st South and 17th East to a point about one mile within the mouth of the Canyon was made during the third biennium. The relocation was perfected and the right of ways were obtained during the fourth biennium (1915-1916). The new location continues eastwardly along 21st South from 17th East for a mile and a half from which point it circles around the point of the mountain at an elevation 200 feet above the Salt Lake City reservoir and the same distance above the old road. It

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	\$258,264.28
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	\$ 1,183.68
	\$257,080.60
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	\$ 76,883.56
<i>Total Expenditures during the Fourth Biennium.....</i>	\$333,964.16

SALT LAKE COUNTY

then converges to intersect the old road at a point four miles distant from the initial point. Construction of this road was commenced in the spring of 1916 by the State Convicts, but was suspended when the convicts were transferred to the concrete road work in Weber County.

Two and one-half miles of concrete road were constructed on State Street in Salt Lake County in 1915. The work was accomplished in September, October and November. This was the first concrete work to be constructed in Salt Lake County. The work was commenced at the north city limits of Murray and it proceeded northwardly along the west side of State Street to Twenty-Seventh South. A slab sixteen feet wide and six inches thick, having a straight surface line, was constructed on top of the old slag surfacing material as a base. The two sets of street car tracks run down the center of the eight-rod street, occupying a right of way twenty and eight-tenths feet wide. The concrete slab was placed at the very edge of the street railway right of way, or ten and four-tenths feet from the center line of the street. A slope of three-tenths feet in sixteen feet toward the west, and at right angles to the center of the street, was given to the surface for the purpose of drainage.

In May, June, July, August, September and October of 1916, ten and one-half miles were added to the State Street work. The strips were completed on both sides of the street from Twenty-First South to one and one-half miles within the town of Murray. From this point south to the Murray City limits, the concrete was constructed on the west side of the street. All of this work consisted of 16-foot slabs. Then from the south Murray limits south for one and one-fourth miles, an eighteen-foot strip of concrete was constructed along the center of the street.

It was decided conjointly by the State Road Commission, the County Commissioners and the property owners between Seventeenth and Twenty-first South Streets to completely pave the three thousand-foot stretch between the streets mentioned with concrete, and to curb and gutter the street and the intersections the same as for Salt Lake City streets. To this end the State Road Commission agreed to

SALT LAKE COUNTY

appropriate an amount equivalent to the cost of two concrete strips each sixteen feet wide and three thousand feet long. The contract for the work was let to J. W. Mellen in the fall of 1916. By the end of the construction season both sides of the street had received the preliminary grading and practically all of the east side of the street had been paved, and the curbs, gutters and resident driveways were completed on both sides of the street. All work was rigidly inspected by an engineer of the State Road Commission. The plans call for a full street of sixty feet from face to face of curbs. It is the intention however, to omit construction along the central twenty and eight-tenths foot strip occupied by the street railway, pending procedure on the part of the County to require the street railway Company to pave this strip.

In July, August and September, 1916, three miles of concrete road were constructed along 33rd South Street between Road No. 56 west and Road No. 32 west. This stretch of concrete was constructed eighteen feet wide, six inches thick on the sides, eight inches thick in the middle and having a two-inch parabolic crown. The slab is located in the center of the right of way. Three-fourths of a mile of the same type of road were also constructed on Twenty-Seventh South Street at Pleasant Green in September and October of 1916.

The surfacing of roads with materials other than concrete as pursued in Salt Lake County during the past biennium consists of the following; three stretches aggregating four miles in the vicinity of Garfield and to the west surfaced with gravel and partly with slag in October and November, 1915, one stretch of 2000 feet near Pleasant Green surfaced with gravel in November, 1915, two stretches amounting to one-half mile between Sandy and Draper surfaced with slag in June, October and November of 1915, two-thirds of a mile just north of Draper surfaced with silica July, August and September, 1916, three stretches aggregating one-third mile just south of Draper surfaced mostly with silica in March and June, 1916, one mile situated about three miles south of Draper surfaced with gravel in October and November, 1915, one stretch of three-fourths of a mile on Thirty-Third South just west of the Jordan river

SALT LAKE COUNTY

and three-fourths of a mile just west of State Street both surfaced with roadamite in October, 1916, and numerous small stretches in Parley's Canyon between the mouth and the summit aggregating about one and one-third miles surfaced with shale at various times throughout the biennium.

The following roads in Salt Lake County were officially designated as State Roads during the past biennium: State Street extending through the City of Murray from the north city limits to the south city limits was designated March 13, 1916. The road extending along 33rd South Street from State Street west to Road No. 84 West, thence north one mile was designated April 24, 1916. Beck Street in Salt Lake City, extending from the Warm Springs northwardly to the Davis County line was designated June 10, 1916. The road extending along 33rd South Street from State Street east to intersect the old Territorial Road was designated November 13, 1916.

In 1915 a wood trestle bridge was constructed over the Jordan River, just north of 14th South Street, in order to facilitate the hauling of sand from the Salt Lake County Sand Pit to the concrete road work. A great saving in the cost of the hauling was made by the use of this bridge.

In 1916 the chief bridge work accomplished on the State Roads consisted of the repairing and enlargement of three bridges on the Salt Lake-Utah Road, the Big Cottonwood bridge, the Mill Creek bridge and the Head Race bridge. Extensions were made to bring the bridges to a symmetrical location with respect to the new concrete road strips, and new head walls were constructed conforming to the standard designs of the State Road Commission. All new work was constructed of reinforced concrete regardless of the materials existing in the old structures.

Seventy-eight culverts were constructed in Salt Lake County during the past biennium, five being constructed in 1915 and seventy-three in 1916. Forty-one culverts were constructed of concrete pipe, thirty were constructed of reinforced concrete, two of corrugated iron pipe, two of stone, two of wood, and one of stone and wood.

SALT LAKE COUNTY

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Salt Lake County during the past biennium, as will be noted in the accompanying tables.

SALT LAKE COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SALT LAKE COUNTY
1915-1916.**

RECEIPTS**State Appropriations:****Balance State Appropriation on Hand**

Dec. 1, 1914.....	\$ 368.45	
1915-1916 State Appropriations.....	9,464.29	
Motor Vehicle Fee Fund.....	118.93	\$ 9,951.67

County Appropriations and Tax Levies:

1914 Special County Appropriation...	\$ 1,734.39	
1915-1916 County Appropriations....	9,464.29	
Balance Road Tax on Hand Dec. 1, 1914	18,891.94	
Interest on Deposit Feb. 16, 1914, to Dec. 31, 1914.....	211.86	
1915 State Road Tax Collections Date of Levy to Nov. 30, 1916.....	188,655.39	
1916 State Road Tax Collections Date of Levy to Nov. 30, 1916.....	38,855.98	257,813.85

City Appropriations:

Murray City	4,000.00	\$271,765.52
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DISBURSEMENTS

State Appropriation Fund.....	\$ 9,824.74	
City Appropriations	4,000.00	
County Appropriation Fund.....	8,198.68	
Special State Road Tax Levy.....	236,121.93	
Motor Vehicle Fee Fund.....	118.93	\$258,264.28

Gross Balance Dec. 1, 1916.....	\$13,501.24
Less Unpaid Labor and Purchases...	76,883.56

*Deficit Dec. 1, 1916.....	\$63,382.32
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STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 98,315,176.00	2	19.12	\$196,611.23
1916	236,328,079.00	1/2	8.81	118,155.22

*Deficit covered by 1916 tax collections to be remitted after Dec. 1, 1916.

SALT LAKE COUNTY

SALT LAKE COUNTY--ROAD CONSTRUCTION, 1915.

SALT LAKE COUNTY--ROAD CONSTRUCTION, 1915.

PRECINCT	Miles of State Road Designated	ROAD GRADED			ROAD SURFACED							
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
NO. 2	19.5	40	1.30	\$ 270.43	\$ 284.86	40	Gravel	16	6	0.30	\$ 207.11	\$ 691.67
NO. 3	2.3	64	2.39	2,690.92	1,628.00	64	Concrete	14	6	0.11		
						64	Concrete	16	6	2.23	20,563.38	12,788.02
NO. 4	8.5					48	Slag and Gravel	21	8	1.75		
						48	Gravel	21	6	2.73	4,065.41	884.30
NO. 5	7.2											
NO. 6	2.0											
NO. 7	2.0	48	0.33	941.92	2,478.74	48	Slag	22	6	0.11		
NO. 8	6.5	36	0.62			36	Gravel and Silica	19	10	1.06		
		48	0.03	541.33	773.23	48	Slag and Earth	23	9	0.13	2,170.35	2,556.73
NO. 9	2.0											
NO. 11	3.3											
TOTAL	53.3		4.77	\$ 5,744.69	\$ 1,204.33					8.84	\$37,946.64	\$ 4,328.61

*Cost not segregated.

*Cost not segregated.

SALT LAKE COUNTY

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SALT LAKE COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
EMIGRANT TRAIL	11.0											
EAST 12TH SOUTH	2.4											
EAST 14TH SOUTH	2.0											
MAGNA-TOOELE	5.5											
PARLEY'S CANYON	13.7	16 20	2.50 3.49	\$ 8,293.52	\$ 1,384.40		Shale Shale Shale Shale	12 12 16 16	12 4 6 9	0.24 0.08 0.48 0.61	\$ 669.51	\$ 474.83
SALT LAKE-DAVIS	2.7											
SALT LAKE-UTAH	19.6	22 36	5.10 5.32				Gravel Silica Concrete Concrete Concrete Concrete	18 14 16 16-18 18 19.6	6 5 6 6-8 6-8 6	0.08 1.22 8.39 0.07 1.40 0.55	135,666.97	11,535.57
WEST 12TH SOUTH	12.1											
WEST 14TH SOUTH	13.5	30	3.72	1,018.99	273.92		Concrete Roadamite	18 14	7 6	3.72 1.50	74,624.85	14,295.95
TOTAL	82.5		20.13	\$14,367.97	\$ 713.76					18.34	\$210,961.83	\$11,502.79

SALT LAKE COUNTY

PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
NO. 2	Sand Pit Bridge.	Wood Stringer Pile Trestle	Pile Bents	69	12	All	\$ 940.54	Con. Pipe	3	18"	20	\$ 55.03	\$ 18.34
NO. 3													
NO. 8								Concrete Concrete	1 1	2'x2' 3'x2'	48 52	150.26	75.13
TOTAL							\$ 940.54		5			\$ 205.29	\$ 41.06

SALT LAKE COUNTY

SALT LAKE COUNTY

SALT LAKE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916—Continued.													
ROAD	BRIDGES					CULVERTS							
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
WEST 14th SOUTH								Concrete	1	2 1/2' x 1'	55		
								Concrete	1	3' x 1'			
								Concrete	1	3' x 1'-3"			
								Concrete	1	3' x 2'			
								Concrete	1	2 1/2' x 1'-3"			
								Concrete	1	3 1/2' x 1 1/2'			
								Concrete	1	4' x 1'-3"			
								Concrete	1	4' x 3'			
								Concrete	1	6' x 5'			
								Concrete	1	12"			
								Concrete	1	36"			
								Wood	1	16" x 12"			
TOTAL							\$ 2,876.13		73			\$ 3,714.40	\$112.56
												\$ 6,040.80	\$ 82.75

*Dimensions not reported.

*Dimensions not reported.

SALT LAKE COUNTY

(Salt Lake No. 48.) Sand Pit near 14th South and Jordan River.

Salt Lake No. 88.) Taylorsville Gravel Screening Plant, Supplying Aggregate
for Concrete Roads.

SALT LAKE COUNTY

(Salt Lake No. 37.) Delivering Sand and Gravel on State Street by Means
of Electric Railway.

(Salt Lake No. 81.) Delivering Sand and Gravel on West 14th South Street by
Means of Caterpillar and Trailers.

SALT LAKE COUNTY

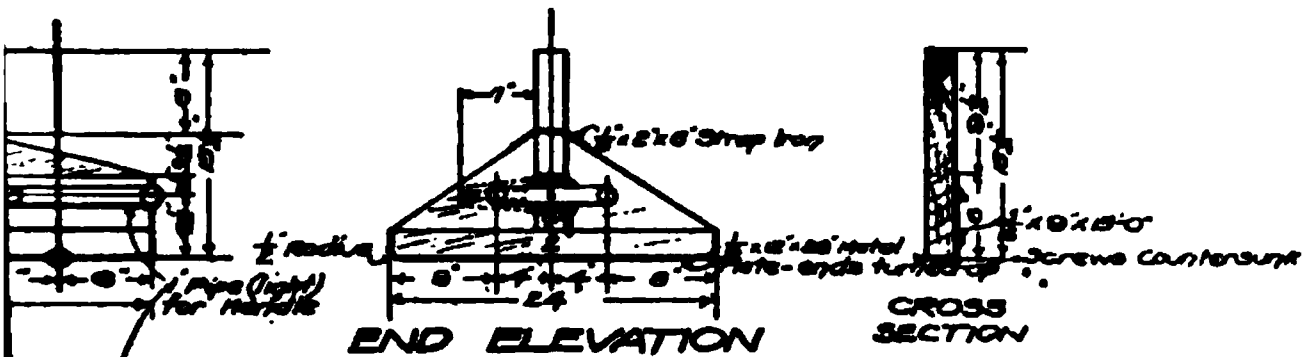
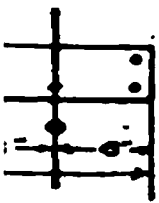
(Salt Lake No. 83.) Constructing Dykes for Pool Curing Concrete Road.

**(Salt Lake No. 128.) Concrete Road in the Process of Curing on State Street
just South of Murray.**

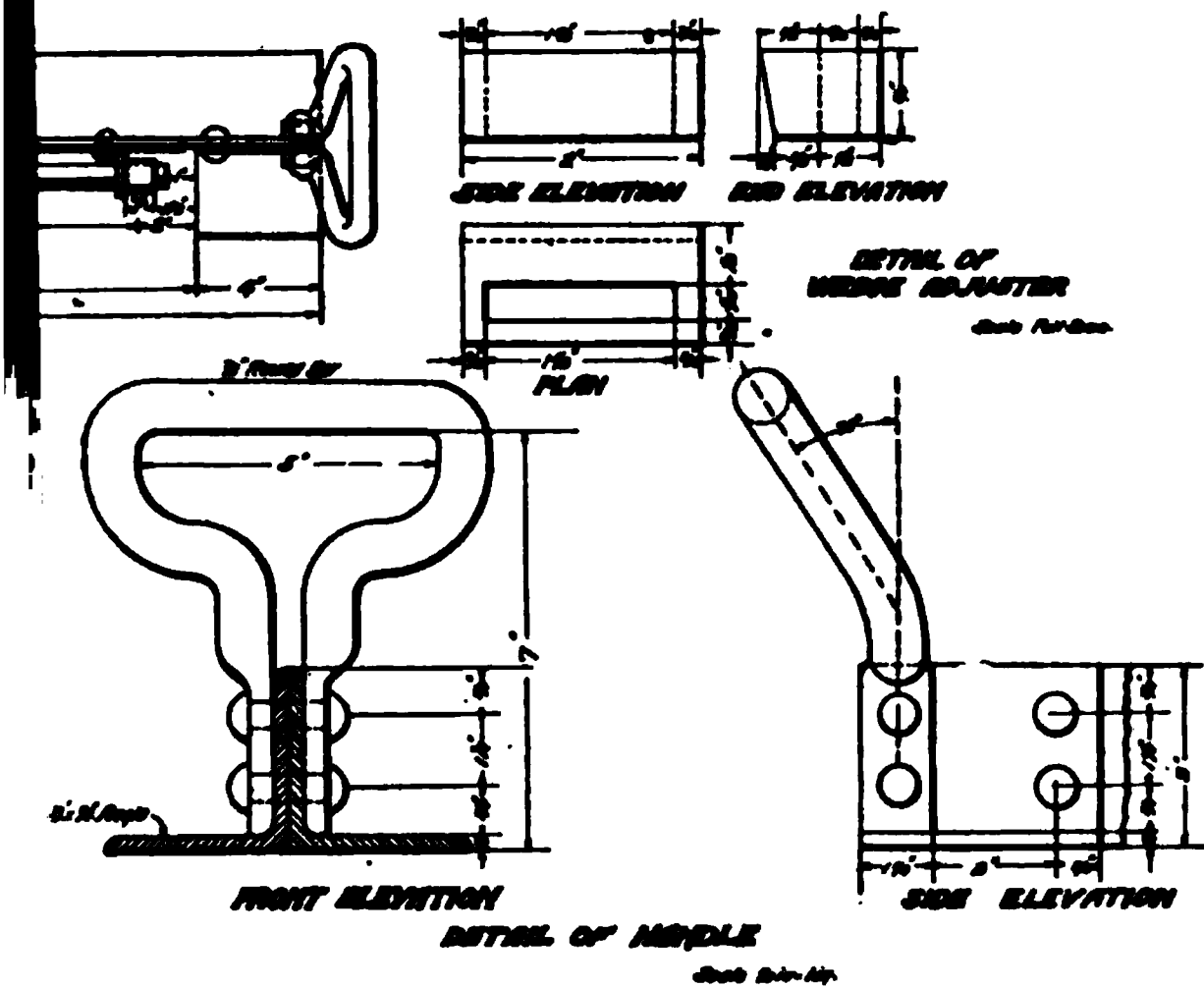
SALT LAKE COUNTY

No. 91.) Typical Dugway and Railing on Parley's Canyon Road.

re No. 101.) Road Scene Showing Beautiful Curves Through the
Foliage of Parley's Canyon.



UTAH STATE ROAD COMMISSION	
DETAILS OF TEMPLATE	
FOR 14-FT. CONCRETE ROAD	
SALT LAKE COUNTY	
S. R. Morgan State Road Engineer Salt Lake City, Utah	
Designed by S. R. Morgan	Scale 1"=1'
Drawn by J. L. ...	Issued Sept. 4, 1945
Checked by S. R. Morgan	Project Salt Lake Office
Approved by ...	
Q-1	



UTAH STATE ROAD COMMISSION	
DETAILS OF TEMPLATE	
FOR 14-FT. CONCRETE ROAD	
SALT LAKE COUNTY	
S. R. Morgan State Road Engineer Salt Lake City, Utah	
Designed by S. R. Morgan	Scale 1"=1'
Drawn by J. L. ...	Issued Sept. 4, 1945
Checked by S. R. Morgan	Project Salt Lake Office
Approved by ...	
R-14	

THE NEW YORK
PUBLIC LIBRARY

ASTOR, LENOX
TILDEN FOUNDATIONS

SAN JUAN COUNTY

At the beginning of the biennium there was the net sum of \$11,242.13 remaining in the State Road Fund available for use in San Juan County. During the biennium the State appropriated \$9,464.29, the County appropriated \$2,366.07, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$5,580.23 by Special Road Tax Levy, making a total of \$28,771.64, which has been available for road construction. From this sum \$32,478.11* has been expended, leaving a deficit of \$3,706.47.

In the spring of 1915 a stretch of road five miles long was graded north of Lasal, and in May, 1916, another mile of grading was added to it.

The road between Monticello and Lasal was all improved in 1915. Eleven miles were graded, one mile was graded and surfaced, and seventeen miles were partially graded. Only two miles of the thirty miles of road between Monticello and LaSal were left untouched. Three and a half miles of the road extending east from Monticello were also graded in September of the same year.

At Grayson one mile was graded in November of 1915, and just north of Grayson one mile was graded in April of 1916.

The road extending from a point on the Grand County line about nine miles southeast of Moab southwardly via Monticello, Verdure, Blanding and Bluff, thence southwestwardly via Goodridge to the Bridge over the San Juan River was officially designated as a State Road December 21, 1915.

In 1915, the Cane Springs Wash bridge was constructed in Lasal precinct. The bridge has a span of twenty-seven feet and is constructed of log stringers on masonry abutments. The roadway is sixteen feet wide.

The Vega Wash bridge in Monticello precinct was also constructed in 1915. A standard sixty-foot wood truss bridge

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$88,169.57</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 5,024.27</i>
	<i>\$28,145.80</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 4,882.81</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$82,478.11</i>

SAN JUAN COUNTY

spans the main channel, and a forty-eight-foot wood trestle structure spans the remainder of the wash. By using trestle work as an approach to the main span a saving was made by avoiding a large earth fill and also by doing away with the construction of a large concrete abutment which would have been extremely expensive in this remote locality. No bridges were constructed in 1916.

Eighty-three culverts were constructed in San Juan County during the past biennium, forty in 1915, and forty-three in 1916. Thirty-four were constructed of stone, twenty-two were constructed of corrugated iron pipe, twenty-four of wood and three of logs.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in San Juan County during the past biennium, as will be noted in the accompanying tables.

SAN JUAN COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS IN

SAN JUAN COUNTY

1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand

Dec. 1, 1914.....	\$ 4,942.97		
1915-1916 State Appropriations.....	9,464.29		
Motor Vehicle Fee Fund.....	118.92	\$14,526.18	

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ 2,299.90		
1915-1916 County Appropriations....	2,366.07		
Balance Road Tax on Hand Dec. 1, 1914	9,023.53		
1915 State Road Tax Collections Date of Levy to Nov. 30, 1916.....	4,239.30		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	1,895.84		
Additional Account of Error in Original 1912 State Road Tax Collection Report Rendered by County Prior to Dec. 1, 1914.....	79.15		
	<u>\$19,903.79</u>		

Less Deductions Account of Errors in Original 1911, 1912, 1913 and 1914 State Road Tax Collection Reports Rendered by County Prior to Dec. 1, 1914

634.06 19,269.73 \$33,795.91

DISBURSEMENTS.

State Appropriation Fund.....	\$14,205.51		
County Appropriation Fund.....	4,480.71		
Special State Road Tax Levy.....	14,364.43		
Motor Vehicle Fee Fund.....	118.92		\$33,169.57
Gross Balance Dec. 1, 1916.....			\$ 626.34
Less Unpaid Labor and Purchases...			4,332.81
*Deficit Dec. 1, 1916.....			<u>\$ 3,706.47</u>

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 872,643.00	5	0.47	\$ 4,362.74
1916	1,825,511.00	2	1.28	3,649.74

*Deficit to be covered by 1916 tax collections, not remitted prior to Dec. 1, 1916.

SAN JUAN COUNTY

SAN JUAN COUNTY—ROAD CONSTRUCTION, 1915.												
PRECINCT	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	
BLUFF	39.5											
GRAYSON	27.0	18	1.00	\$ 30.00	\$ 30.00							
LA SAL	29.0	12 20	3.00 8.00	6,069.81	551.80							
MONTICELLO	51.0	12 15 20	2.55 3.00 6.00	6,446.12	558.11	20	Clay	10	8	1.00	\$ 594.25 \$ 594.25	
TOTAL	146.5		23.55	\$12,545.93	\$ 532.78					1.00	\$ 594.25 \$ 594.25	

SAN JUAN COUNTY

SAN JUAN COUNTY—ROAD CONSTRUCTION, 1916.													
ROAD	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Total Expenditures	Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures		
BLUFF-SAN JUAN	28.0												
LA SAL-COLORADO	15.0	12	6.00	\$10,287.10	\$ 1,716.18								
LA SAL-GRAND	19.0	12	1.00	1,082.38	1,082.38								
MONTICELLO-BLUFF	45.0	20	1.00	70.35	70.35								
MONTICELLO-COLORADO	16.0												
MONTICELLO-LA SAL	35.0												
TOTAL	158.0		8.00	\$11,449.83	\$ 1,431.28								

SAN JUAN COUNTY

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SAN JUAN COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
LA SAL	Cane Springs Wash	Wood Stringer	Stone in Cement Mortar	27	16	All	\$ 608.63	Cor. Iron Log Stone Stone	10 1 16 1 1	18" 11'x3' 2'x2' 2½'x2' 2½'x2½'	16 16 15 12 12	\$ 444.24	\$ 15.83
	Vega Wash ...	Wood Truss and Trestle	Stone with Concrete Top	60' Truss 48' Trestle	16	All	3,420.89	Cor. Iron Wood Log Log Stone Stone	3 2 1 1 1 3	18" 2'x2' 6'x4' 10'x10' 1½'x1½' 2'x2'	17 16 16 16 16 17	83.80	7.62
	Big Indian	Wood Truss	Stone	40	16	Eng'g.	3.83						
									40			\$ 528.04	\$ 13.20
TOTAL							\$4,033.35						

SAN JUAN COUNTY

SAN JUAN COUNTY

**(San Juan No. 29.) Vega Wash Bridge, Standard Wood Structure.
Main Span 60 ft. Total Length 110 ft.**



(San Juan No. 31.) View Showing Flooring and Approach Vega Wash Bridge.

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SANPETE COUNTY

At the beginning of the biennium there was no balance remaining in the State Road Fund available for use in Sanpete County. During the biennium the State appropriated \$9,464.29, the County appropriated \$9,464.29, the Motor Vehicle Fee Fund amounted \$118.92, and the County raised \$17,904.37 by Special Road Tax Levy, and Spring City raised by Special Road Tax Levy \$259.63, making a total of \$37,211.50 which has been available for road construction. From this sum \$35,608.15* has been expended, leaving a net balance of \$1,603.32 on hand.

The road work accomplished in Sanpete County during the past biennium is as follows; two-thirds of a mile just west of Milburn graded in November and December, 1915, one-half mile between Milburn and Fairview graded in May, 1916, three-fourths of a mile extending in a north and south direction through the town of Salina graded in October and November, 1915, one and one-third miles just west of Mt. Pleasant graded in October and November, 1916, one mile just south of Spring City graded in April, 1916, one mile just north of Fountain Green graded in November, 1916, three miles just south of Moroni graded in April, May, June and July, 1916, two miles just north of Ephraim graded in April, 1916, one and one-fourth miles in the city of Manti graded in October, 1915, four miles just south of Manti regraded in April, 1916, two and one-half miles of this regraded road surfaced with gravel and shale in November, 1916. On the road extending northwardly from Gunnison toward Levan in Juab County, eight miles were graded in May, 1916, six miles in June, 1916, three-fourths mile in August, 1916, and three-fourths mile in October, 1916. Three-fourths mile of thirty-six-foot roadway was also graded in the town of Gunnison, in August, 1916, and two and one-fourth miles leading eastwardly from the north part of town

***EXPENDITURES.**

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$31,358.26</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 5,544.08</i>
	<i>\$25,814.18</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 9,794.00</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$35,608.18</i>

SANPETE COUNTY

were graded in March and April, 1915. In August, 1916, one-fourth mile in the north part of Gunnison was surfaced with gravel, and of the road leading to the east from Gunnison one and one-half miles were surfaced with lime shale in October, 1915. Five miles south of Gunnison, a one-mile stretch of road was surfaced with gravel and sand in November, 1915.

A portion of the Fairview-Huntington road was graded in July, August and September, 1916. Approximately two miles of road were graded, extending from a point about one thousand feet east of the Emery County line westwardly. All of this work is included within the boundaries of the Manti National Forest.

On the Ephraim-Orangeville road about seven and one-half miles of grading work was accomplished in Sanpete County in the months of May, June and July, 1916. One and one-half miles of this work extend westwardly from the Manti National Forest boundary toward Ephraim, and the remaining six miles extend eastwardly into the forest reserve. This work was done partly by the State Road organization and partly by the U. S. Forest Service. The latter department expended \$530.83 on the survey of this road in 1915, and in 1916, \$838.80 was expended on surveying and engineering and \$4,764.00 plus the statutory salaries of the rangers was expended on the construction.

The following official designations of State Roads were made during the past biennium: The road extending from Gunnison northwestwardly toward Levan to the Juab County line was designated February 28, 1915. The road extending from Fairview eastwardly through Cottonwood Canyon toward the Deseret Coal Mine to the Emery County line was also designated February 28, 1915. The road from Mount Pleasant to Moroni was designated June 14, 1915. The road from Ephraim eastwardly along Seeley Creek to the Emery County line, to connect with the road from Orangeville, was designated November 22, 1915. The road from Centerfield south via Axtel to the Sevier County line was designated December 21, 1915. The road extending from Gunnison eastwardly to Mayfield, thence northwardly to intersect the State Road just south of Sterling, was designated September 11, 1916.

SANPETE COUNTY

A reinforced concrete slab bridge was constructed in the city of Mount Pleasant in 1916. The bridge was designed to replace the old wooden structure which was literally falling to pieces. The structure has a span of eighteen feet face to face of abutments, and a clear width of roadway of twenty-nine feet. The bridge was built extra wide to accommodate the city traffic. No bridges were constructed in 1915.

One hundred and forty-two culverts were constructed in Sanpete County during the past biennium, thirty-three in 1915, and one hundred and nine in 1916. Of those constructed, sixty are of corrugated iron pipe, twenty-nine of reinforced concrete, thirty of wood, twenty of concrete pipe, and three of logs.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Sanpete County during the past biennium, as will be noted in the accompanying tables.

SANPETE COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SANPETE COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	463.17	
1915-1916 State Appropriations.....		9,464.29	
Motor Vehicle Fee Fund.....		118.92	\$10,046.38

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$	1.04		
1915-1916 County Appropriations.....		9,464.29		
Balance Road Tax on Hand Dec. 1, 1914		5,079.87		
1915 State Road Tax Collections Date of Levy to Dec. 1, 1915.....		4,072.41		
1916 State Road Tax Collections Date of Levy to Dec. 1, 1916.....		10,967.14		
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		36.30		
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		6.53		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		1,501.22		
Transient Herds Garfield County, 1914		15.84		
Additional Collections 1915 State Road Tax Dec. 1, 1915, to Dec. 1, 1916		1,299.66		
Collections 1915 Back Taxes to Dec. 1, 1916		5.27	32,449.57	
City Tax Levies:				
1915 Spring City Tax Remitted August 28, 1916		259.63	259.63	\$42,755.58

DISBURSEMENTS.

State Appropriation Fund.....	\$	9,927.15	
County Appropriation Fund.....		9,420.67	
Special State Road Tax Levy.....		11,891.52	
Motor Vehicle Fee Fund.....		118.92	\$31,358.26
Gross Balance Dec. 1, 1916.....			\$11,397.32
Less Unpaid Labor and Purchases...			9,794.00
Net Balance December 1, 1916.....			\$ 1,603.32

SANPETE COUNTY

STATEMENT OF ROAD TAX LEVIES.

	Year	Taxable Valuation	Mills	Loss in Fractions	Levy
County	1915	\$ 5,454,627.00	1	1.27	\$ 5,453.35
Ephraim City	1915	402,195.00	2	0.14	804.25
Fairview City	1915	198,829.00	2	0.07	397.58
F'tain Green City.	1915	124,232.00	1	0.03	124.20
Moroni City.....	1915	183,882.00	2	0.02	367.74
Mt. Pleasant City.	1915	545,404.00	2	0.14	1,090.66
Spring City	1915	136,435.00	2	0.06	272.81
County	1916	11,179,922.00	1 1/5	3.80	13,412.10
Fairview City....	1916	339,467.00	1	0.08	339.38
Mt. Pleasant City.	1916	986,840.00	1 1/4	0.22	1,233.33
Spring City.....	1916	246,461.00	1	0.09	246.37

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SANPETE COUNTY—ROAD CONSTRUCTION, 1915.

PRECINCT	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
CENTERFIELD	7.0					30	Shale	12	6	1.02	\$ 498.75	\$ 488.97
CHESTER	6.6											
EPHRAIM	7.6											
FAIRVIEW	5.3	50	0.76	\$ 1,158.07	\$ 1,523.77							
FOUNTAIN GREEN	7.5											
GUNNISON	5.0	82 30	0.32 1.91	1,008.69	452.33	30	Lime Shale	8	6	1.48	628.95	423.61
INDIANOLA	6.1											
MANTI	8.9	65	1.27	1,504.22	1,184.43							
MEADOWVILLE	1.1											
MILBURN	6.5	30	0.61	116.25	190.57							
MORONI	9.8											
MT. PLEASANT	8.6	30	0.34	428.43	1,260.90							
PLEASANT VIEW	2.1											
SPRING CITY	6.7											
STERLING	7.0											
TOTAL	96.8		5.21	\$ 4,215.66	\$ 809.15					2.50	\$ 1,126.70	\$ 450.28

SANPETE COUNTY

1911

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SANPETE COUNTY

SANPETE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CENTERFIELD								Concrete	1	3'x3'	28	\$ 138.66	\$138.66
FAIRVIEW								Cor. Iron	4	12"	29	121.90	30.48
FOUNTAIN GREEN								Log	1	*	*	3.06	3.06
GUNNISON								Log	1	*	*	1.76	1.76
INDIANOLA								Concrete	1	4'x3'	28		
								Concrete	1	5'x3'	28		
								Concrete	2	8'x4'	28	1,222.78	305.70
MANTI								Cor. Iron	12	12"	46	527.76	43.98
MEADOWVILLE								Cor. Iron	1	12"	36	28.70	28.70
MILBURN								Log	1	*	*	6.00	6.00
MORONI								Log	2	*	*	13.74	6.87
MT. PLEASANT	Mt. Pleasant	Concrete Slab	Concrete	19	30	Eng'g. Etc.	\$ 64.89	Concrete	1	4'x2'	15	116.82	116.82
SPRING CITY								Cor. Iron	1	8"	22		
								Cor. Iron	1	10"	24		
								Cor. Iron	1	12"	28		
								Cor. Iron	2	8'x6'	32	908.00	181.60
TOTAL							\$ 64.89		33			\$ 3,089.16	\$ 93.61

*Dimensions not reported.

SANPETE COUNTY

SANPETE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

ROAD	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
EPHRAIM-EMERY								Cor. Iron	5	12"	18		
EPHRAIM-MT. PLEASANT								Cor. Iron	4	24"	18		
								Wood	1	2'x2'	16	\$ 338.24	\$28.19
								Wood	2	3'x4'	16		
								Cor. Iron	2	12"	44		
								Cor. Iron	1	15"	24		
EPHRAIM-MORONI FAIRVIEW-EMERY								Cor. Iron	2	24"	24		
								Concrete	1	2'x1'	36		
								Concrete	1	3'x2'	28	431.77	61.68
								Concrete	1	3'x2'	24	†	
								Wood	2	10"x10"	16		
FAIRVIEW-UTAH								Wood	1	12"x14"	16		
								Wood	7	12"x18"	16		
								Wood	1	16"x24"	16		
								Wood	1	6'x3'	16	54.11	4.51
GUNNISON-JUAB								Cor. Iron	6	12"	26		
								Cor. Iron	1	15"	32		
								Concrete	1	2'x1½'	28	143.78	17.97
								Cor. Iron	1	16"	24		
GUNNISON-SEVIER								Con. Pipe	10	12"	20		
								Con. Pipe	2	18"	20		
								Con. Pipe	8	24"	21	1,079.81	51.42
								Cor. Iron	1	10"	50	104.97	104.97

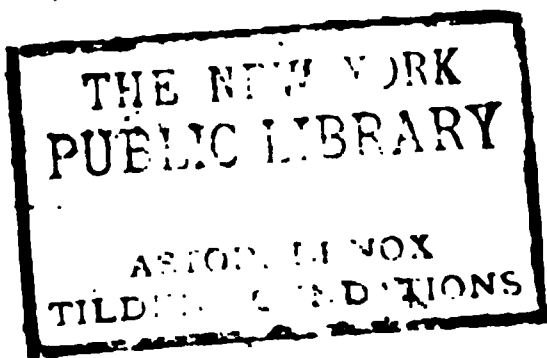
†Cost not segregated.

SANPETE COUNTY

SANPETE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.—Continued.

ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
MANTI-GUNNISON								Cor. Iron Concrete Concrete Wood-log	1 3 1 5	16" 2'x2' 3'x2' "	24 23 36 "	\$ 448.28	\$ 44.83
MORONI-CHESTER								Cor. Iron Concrete Concrete Concrete Concrete	2 10 1 1 6 1	10" 12" 1'x1' 1'x2' 2'x2' 3'x2'	24 25 24 24 24 24	1,448.58	68.98
MORONI-JUAB								Cor. Iron	1	12"	20	29.07	29.07
MT. PLEASANT-MORONI								Cor. Iron Concrete Concrete Wood	2 2 1 8	12" 2'x2' 5'x3' 18"x12"	24 24 16	512.97	39.46
MT. PLEASANT-FAIRVIEW	Mt. Pleasant	Concrete Slab	Concrete	19	30	All	\$1,263.97	Cor. Iron Concrete	1 1	" "	" "	31.40	15.70
TOTAL							\$1,263.97		109			\$ 4,632.98	\$ 42.41

*Dimensions not reported.
†Cost not segregated.



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SEVIER COUNTY

At the beginning of the biennium there was the net sum of \$11,012.11 remaining in the State Road Fund available for use in Sevier County. During the biennium the State appropriated \$11,064.29, the County appropriated \$5,532.14, the Motor Vehicle Fee Fund amounted to \$118.92, the cities of Aurora, Elsinore, Glenwood, Joseph, Monroe and Redmond appropriated \$707.00 and the County raised \$17,359.64 by Special Road Tax Levy, making a total of \$45,794.10, which has been available for road construction. From this sum \$49,962.43* has been expended, leaving a deficit of \$4,168.33.

The following road work was accomplished in Sevier County during the past biennium. In Salina a little strip of a thousand feet was graded in December, 1915, and just west of the town on the east side of the Sevier River another little stretch of a thousand feet was surfaced with gravel in December, 1915. On the road extending southwardly from Denmark Wash one mile was surfaced with gravel in November, 1915. Two miles of the road extending from the south city limits of Salina southeastwardly to the mouth of Salina Canyon were graded in May and June of 1916.

In the town of Vermillion one-half mile was surfaced with gravel in December, 1915, and one-half mile just north of the town was graded and surfaced in November, 1915.

Extending from Sigurd southwardly for a distance of nine and one-half miles the road was graded in June, July and August of 1915, and in July, 1915, part of this road aggregating seven miles in all was surfaced with clay, shale and gravel.

At Richfield, one mile of road in the south end of the city was graded and surfaced with gravel in March, 1915, and May, 1916. At Joseph, one and one-half miles were graded in March, 1916. At Monroe, one-half mile was graded in May, 1915, and

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$42,435.56
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 5,608.40
	\$36,827.16
Plus Unpaid Labor and Purchases from Fourth Biennium.....	\$13,035.27
Total Expenditures during the Fourth Biennium.....	\$49,862.43

SEVIER COUNTY

a stretch two-thirds of a mile long was graded and surfaced with gravel in October, 1916.

Convict labor was employed in the grading of the road extending southwardly from Sevier Station to the Piute County line. This road was constructed entirely along an original location. No Roadway had ever existed through the Sevier Canyon previous to the construction here mentioned. Travel through the Canyon was only possible by rail and by horse-back over the railroad grade. The location was laid out in the fall of 1915, and the grading work was commenced in November of that year, a stretch of two-thirds of a mile being completed in that month. The work was also pursued throughout each month in the year of 1916, during which time about five and one-half miles of road were constructed. The location of this roadway extends all the way to Marysvale in Piute County, and it is the intention to complete the construction to that point eventually.

In Salina Canyon a stretch of roadway three miles in extent was graded in May, 1916. This work is situated just east of the summit of the canyon. Another stretch of four and one-half miles was constructed in Salina Canyon in April and May of 1916. This stretch is located just within the east boundary of the Canyon, and it extends to the county line.

The following roads were officially designated as State Roads December 21, 1915, the road from Joseph to Cove, the road from Joseph to Monroe, the road from Vermillion southwardly via Sigurd and Venice to Richfield, and the road from Salina eastwardly through Salina Canyon to the Emery County line.

In 1915, a reinforced concrete girder bridge of thirty-foot span was constructed over the Vermillion Canal in Richfield Precinct. The bridge is a skew span of forty-nine degrees and the roadway is seventeen feet wide in the clear. A reinforced concrete slab bridge of twenty-foot span was constructed over the Richfield Canal at Richfield. This bridge was made with a clear width of roadway of twenty-four feet to accommodate the intense beet traffic near the railroad yards. At the beginning of the biennium in 1915 the superstructure of the Salina

SEVIER COUNTY

Creek bridge was erected. A complete set of drawings, photographs, and a description of this bridge are given in the Third Biennial Report. This is the first State Road bridge constructed with sidewalks separate from the roadway.

In 1916, the two largest concrete bridges in the State were constructed over the Sevier River in Sevier Canyon. Both bridges were constructed from the same design. The design consists of two thirty-foot spans, or a total span of sixty feet with a pier in the middle. The camber is very distinct and is applied to the sixty-foot span as though it were a free span. The railings serve as girders except over the wing walls, and they are coped and paneled in the usual style typical of the State Road concrete bridges. The roadways over these bridges are sixteen feet wide in the clear. Some convict labor was used in the construction of these bridges.

Clear Creek bridge and Cove Canal bridge were also constructed in 1916. They are of eighteen- and twelve-foot spans, respectively, and are constructed of reinforced concrete. The roadways are sixteen feet wide. These bridges were built by the same organization as the Sevier Canyon bridges. The Monroe Canal bridge and the Burrville bridge are two reinforced concrete structures constructed also in the year of 1915. The designs are standard, the roadway being sixteen feet wide.

The Ivie Creek bridge is a sixty-foot span standard wood truss bridge constructed on masonry abutments. The bridge is located practically on the County line between Emery and Sevier Counties, and for this reason the cost of the bridge has been equally divided between the two Counties.

There were forty-one culverts constructed in Sevier County during the past biennium, thirty-nine in 1915, and two in 1916. Of the culverts constructed, twenty-eight are of reinforced concrete, six of concrete pipe, six of corrugated iron pipe, and one of wood.

Considerable repair and maintenance of roads, bridges and culverts, also some fences, railings, retaining walls, and other maintenance and miscellaneous work was accomplished during the past biennium in Sevier County, as will be noted in the

SEVIER COUNTY

accompanying tables. Some maintenance work was also accomplished in 1915 by the U. S. Forest Service in Salina Canyon to the extent of \$702.83, and an expenditure of \$1,261.84 was made for repairing the road with shale and loose rock. In 1916 they expended \$716.45 for similar repair work in Salina Canyon.

SEVIER COUNTY
STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SEVIER COUNTY
1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 346.92	
1915-1916 State Appropriations....	11,064.29	
Motor Vehicle Fee Fund.....	118.92	\$11,530.13

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ 1,824.74	
1915-1916 County Appropriations....	5,532.14	
Balance Road Tax on Hand Dec. 1, 1914	14,448.85	
1915 State Road Tax Collections Date of Levy to Nov. 30, 1916.....	14,505.22	
Additional Collections 1911 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	13.37	
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	84.64	
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	196.29	
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	2,560.12	39,165.37

City Appropriations:

1916—Aurora	\$ 50.00	
1916—Elsinore	50.00	
1916—Glenwood	45.00	
1916—Joseph	60.00	
1916—Monroe	402.00	
1916—Redmond	100.00	707.00
		\$51,402.50

DISBURSEMENTS.

State Appropriation Fund.....	\$ 9,805.23	
County Appropriation Fund.....	6,350.43	
Special State Road Tax Levy.....	26,210.98	
Motor Vehicle Fee Fund.....	118.92	\$42,485.56
Gross Balance Dec. 1, 1916.....		\$ 8,916.94
Less Unpaid Labor and Purchases ..		13,085.27
*Deficit Dec. 1, 1916.....		\$ 4,168.33

*Deficit covered by 1914 State Road Tax collections not reported prior to Dec. 1, 1916.

SEVIER COUNTY

STATEMENT OF ROAD TAX LEVIES.

	Year	Taxable Valuation	Mills	Loss in Fractions	Levy
County	1915	\$ 3,790,656.00	4	....	\$15,162.62
County	1916	9,918,850.00	1½	....	14,878.32
Richfield City.....	1916	1,523,425.00	1	0.10	1,523.32

SEVIER COUNTY

SEVIER COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.

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SEVIER COUNTY

SEVIER COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
AURORA								Concrete	8	2'x1'	24	\$ 639.74	\$ 79.97
BURRVILLE								Con. Pipe	1	12"	20	16.50	16.50
CENTRAL								Concrete	5	2'x1'	27	294.85	58.97
GLENWOOD								Con. Pipe	2	12"	20		
								Con. Pipe	1	15"	20		
								Con. Pipe	1	24"	20	101.76	25.44
MONROE								Concrete	8	2'x1'	34		
								Concrete	1	3'x1'	24	738.23	49.22
								Cor. Iron	6	8"	10		
RICHFIELD	Vermillion Canal	Concrete Girder	Concrete	30	17	All	\$1,204.93						
	Richfield Canal	Concrete Slab	Concrete	20	24	All	1,183.41						
RICHFIELD-GLENWOOD	Richfield-Sevier..	Steel Truss	Concrete Pile	60	16	Abutments	1,511.53						
SALINA	Salina Creek	Steel Skew Truss	Concrete	60	16	Superstructure	1,283.86						
SIGURD								Con. Pipe	2	12"	20		
								Con. Pipe	2	15"	20	111.26	22.25
								Con. Pipe	1	24"	20		
VERMILLION								Concrete	1	2'x1'	24	75.07	75.07
TOTAL							\$5,183.73		39			\$ 1,977.41	\$ 50.70

SEVIER COUNTY

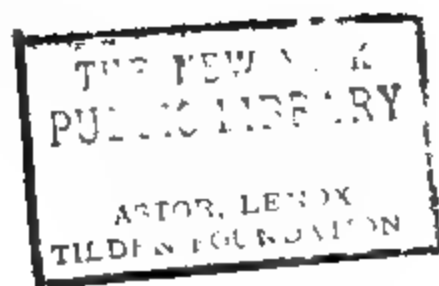
(Sevier No. 81.) Standard Concrete Slab Bridge over Clear Creek.

(Sevier No. 82.) General View of Clear Creek Bridge Site.

SEVIER COUNTY

(Sevier No. 80.) Sevier Canyon Bridge No. 2 Prior to Construction of Approach.

**(Sevier No. 53.) General View of Sevier Canyon Through which the
State Road is being Constructed.**



SUMMIT COUNTY.

At the beginning of the biennium there was the net sum of \$12,529.90 remaining in the State Road Fund available for use in Summit County. During the biennium the State appropriated \$9,464.28, the County appropriated \$9,464.28, the Motor Vehicle Fee Fund amounted to \$118.92, Park City raised \$3,989.90 by taxes and appropriations, and the County raised \$26,382.87 by Special Road Tax Levy, making a total of \$61,950.15, which has been available for road construction. From this sum \$60,792.64* has been expended, leaving a net balance of \$1,157.51 on hand.

The road work completed in Summit County during the past biennium is as follows: In May, June, July and October, 1915, one and one-half miles of road were graded on the road from Henefer to Morgan, and one and one-half miles were graded between Castle Rock and Emory in May, 1915. One and one-fourth miles between Echo and Grass Creek were surfaced with gravel in October and November, 1915. One mile between Grass Creek and Coalville was graded in June and surfaced with gravel in July, 1916. A stretch of road nearly one mile in length lying just south of Coalville was surfaced with gravel in October, 1915. One-half mile just south of Hoytsville was surfaced with gravel in November, 1915. Between Wanship and Rockport one and one-half miles were graded in October, 1916, of which 1,500 feet were surfaced with sand and gravel in the following month. At Rockport a stretch of 1,300 feet was surfaced with gravel in October, 1915. At Peoa a similar strip was surfaced with shale in October, 1915. Just west of Oakley a three-fourths mile stretch was graded and surfaced with shale in September, 1915, and October and November, 1916. Between Oakley and Kamas two small stretches were graded in September, 1915, and October, 1916, amounting to about one mile in all. Almost the entire distance between Oakley and Kamas however, was

*EXPENDITURES.

Total Disbursements during the Fourth Biennium.....	\$57,112.98
Less Unpaid Labor and Purchases from Third Biennium.....	\$ 5,770.51
	\$51,342.47
Plus Unpaid Labor and Purchases from Fourth Biennium....	\$ 9,449.22
Total Expenditures during the Fourth Biennium....	\$60,792.64

SUMMIT COUNTY

surfaced with gravel and shale. This work amounts to four and one-half miles of surfacing, constructed in September and October, 1915, and October and November, 1916. Just west of Kamas two miles were graded in September and October, 1915, and just south of Kamas one-half mile was surfaced in September, October and November, 1915. One-half mile was graded just west of Park City in April, 1915. Just east of Woodland two and one-half miles were graded in May, June and July, 1915. This work lies in the Uinta National Forest and extends almost to the Wasatch County line.

In Park City, in 1915, the main street was surveyed, graded, and paved with reinforced concrete and a stretch of four-tenths of a mile was completed in September and October. The greatest part of this road is forty feet in width from curb to curb. The curbs and gutters were already in place so that their position fixed to a certain extent the grade of the new road. It was desired however, to obtain a smoother profile for the new surface than that represented by a profile of the gutter line, and such was realized in the construction. The old road which was composed of a quartzite-limerock macadam, was exceedingly high as a result of successive surfacing resorted to for the purpose of accommodating the heavy ore-traffic to which the road is subjected. This necessitated an average cut of two feet to bring the surface down to the subgrade required for the concrete. The extreme hardness of the original road crown made it necessary to resort to the use of a steam shovel to excavate to subgrade. The concrete was laid seven inches thick and was finished to a rectangular section. The entire work was reinforced with wire mesh which was placed from two to two and a half inches beneath the surface of the slab. Expansion joints one-fourth inch thick were placed at the end of each half day's run, thereby averaging forty-two feet apart.

The grade of the street is for the most part seven per cent, which made it necessary to use a dry mix in order to keep the concrete from running down hill. The grade also made it impossible to use the "pool method" of curing, and as a substitute the irrigation system was used.

In June, 1916, one-tenth mile of concrete roadway, eighteen feet in width, was added to the south end of the strip above

SUMMIT COUNTY

mentioned. This brings the pavement to the end of the commercial part of the town and connects with the macadam road leading up the Empire Canyon, which road was constructed by the State Road Commission in 1914.

The road from Henefer to Devils Slide by way of the Weber River Narrows was designated as a State Road May 3rd, 1915. The road extending from Peoa southwestwardly to intersect the Park City-Kamas road was designated December 21st, 1915. The road from Park City southeastwardly toward Elkhorn to the Wasatch County line was also designated December 21st, 1915.

In 1915 the old wood truss bridge over the Weber River at Wanship was torn down and taken from the site. Both the superstructure and the old log crib abutments and pier were removed. The old structure consisted of a sixty-foot truss span with an eighteen-foot span of log stringers at one end. In its place concrete abutments were constructed and on them was erected the old steel-truss bridge structure which had been used for many years as a county bridge near Woodland. A new wood floor, including both stringers and floor plank, was placed on the bridge, and the whole structure was painted with the standard bridge paints prescribed by the Commission.

In 1916 a number of small reinforced concrete slab bridges were constructed throughout the county, as follows; the Hoytsville Canal Bridge of nine-foot span, the Hoytsville bridge of ten- and one-fourth-foot span, the Kamas-Francis bridge of ten-foot span, the Kamas Lane bridge of ten-foot span, the Peoa Branch bridge of twenty-foot span, and the Brown's Canyon Bridge of ten-foot span. Each of these bridges has a clear width of roadway of sixteen feet.

Seventy-three culverts were constructed on the State Roads in Summit County during the past biennium, fifty in 1915 and twenty-three in 1916. Of these culverts, fifty-two were constructed of corrugated iron pipe, twelve of reinforced concrete, four of concrete pipe, four of logs and one of wood.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Summit County during the past biennium, as will be noted in the accompanying tables.

SUMMIT COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SUMMIT COUNTY.**

1915-1916.

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	345.16	
1915-1916 State Appropriations.....		9,464.28	
Motor Vehicle Fee Fund.....		118.92	\$ 9,928.36

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$	78.36	
1915-1916 County Appropriations....		9,464.28	
Balance Road Tax on Hand Dec. 1,			
1914		17,876.89	
1915 State Road Tax Collections Date			
of Levy to Dec. 31, 1916.....		17,799.44	
1916 State Road Tax Collections Date			
of Levy to Nov. 30, 1916.....		7,000.00	
Additional Collections 1911 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		244.08	
Additional Collections 1912 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		223.60	
Additional Collections 1913 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		238.05	
Additional Collections 1914 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		757.62	
Additional Collections 1915 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		120.08	\$53,802.40

Park City:

1915 Tax Levy Remitted to Dec. 1,			
1916	\$	1,321.90	
1915 Park City Appropriation.....		1,468.00	
1916 Park City Appropriation.....		1,200.00	3,989.90 \$67,720.66

DISBURSEMENTS.

State Appropriation Fund.....	\$	9,784.31	
County Appropriation Fund.....		7,036.95	
Special State Road Tax Levy.....		38,705.75	
Park City		1,468.00	
Motor Vehicle Fee Fund.....		118.92	\$57,113.93
Gross Balance Dec. 1, 1916.....			\$10,606.73
Less Unpaid Labor and Purchases...			9,449.22
Net Balance Dec. 1, 1916.....			\$ 1,157.51

SUMMIT COUNTY**STATEMENT OF ROAD TAX LEVIES.**

	Year	Taxable Valuation	Mills	Loss in Fractions	Levy
County	1915	\$ 5,550,130.00	3½	0.70	\$19,424.75
County	1916	12,212,673.00	1	0.24	12,212.43
Park City	1915	739,646.00	2	....	1,479.29

SUMMIT COUNTY

SUMMIT COUNTY

SUMMIT COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	Miles of State Road Designated	ROAD GRADED			ROAD SURFACED						Total Expenditures	Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles		
COALVILLE-ECHO	4.7	24	1.00	\$ 156.23	\$ 156.23	24	Gravel	15	12	1.00	\$ 1,506.44	\$ 1,506.44
COALVILLE-PEOA	17.8	20	1.65	306.56	197.77	24	Gravel	12	6	0.28	512.72	1,831.14
ECHO-HENEFER	5.8											
ECHO-RICH	24.3											
HENEFER-CROYDEN	3.0											
HENEFER-EMIGRANT	5.2											
HENEFER-NARROWS	3.3											
KAMAS-WASATCH	11.1	24	0.43	167.23	388.91	24	Gravel	14	9	0.82	241.08	294.00
PARK CITY-DALY JUDGE	1.6					*	*	*	*	*	1,156.88	
PARK CITY-KAMAS	14.1	24	0.06	23.88	378.00							
PARK CITY-PEOA	2.0	24	0.16	489.74	3,060.88	20	Gravel	24	14	0.05	34.75	686.00
PARK CITY-SALT LAKE	11.8	*	*	288.80		25	Shale	14	8	0.11	56.80	871.81
PARK CITY-WASATCH	2.5											
PEOA-KAMAS	7.6	24	0.19	47.87	261.96	24	Gravel	14	8	0.58		
						24	Shale	10	6	0.89	1,506.08	1,028.86
PARK CITY						28	Concrete	18	7	0.10	1,867.59	18,575.90
TOTAL	114.8		2.49	\$ 1,478.11	\$ 423.53					8.83	\$ 6,920.44	\$ 1,506.44

*Mileage not reported.

SUMMIT COUNTY

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SUMMIT COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.—Continued.

PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
WANSHP	Wanship	Steel Truss	Concrete	70	16	All	\$2,839.21	Cor. Iron	1	10"	20		
								Cor. Iron	1	11"	20		
								Cor. Iron	1	15"	28		
								Cor. Iron	3	18"	19	148.76	21.26
								Log	1	*	*		
WOODLAND								Cor. Iron	4	12"	19		
								Cor. Iron	1	15"	18	96.40	19.08
TOTAL							\$2,839.21		50			\$ 2,027.71	\$ 40.55

*Dimensions not reported.

SUMMIT COUNTY

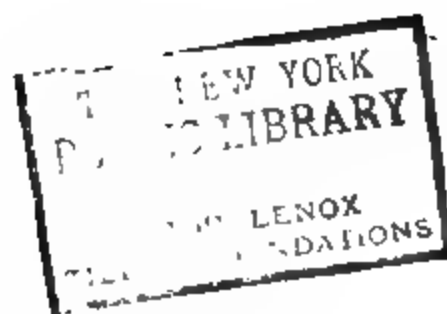
SUMMIT COUNTY

(Summit No. 27.) **Steam Shovel Excavation Prior to Concrete Paving in Park City.**

(Summit No. 22.) **Concrete Road Construction Showing Finishing Bridge.**

(*Summit No. 49.*) **View of Main Street in Park City, Showing
Completed Concrete Pavement.**





TOOELE COUNTY

At the beginning of the biennium there was the net sum of \$1,645.79 remaining in the State Road Fund available for use in Tooele County. During the biennium the State appropriated \$11,064.28, the County appropriated \$9,464.28, the Motor Vehicle Fee Fund amounted to \$118.92, Grantsville City and the Wendover Improvement Committee raised \$4,535.72, and the County raised \$18,836.93 by Special Road Tax Levy, making a total of \$45,665.92, which has been available for road construction. From this sum \$40,144.05* has been expended leaving a net balance of \$5,521.87 on hand.

The road work accomplished in Tooele County during the past biennium consists of the following: In the town of Grantsville two and one-half miles were graded and surfaced with gravel in April, 1916. Between Grantsville and Timpie practically the whole distance of fourteen miles was graded in April and May, 1915, and during the same period one and one-half miles of this stretch were surfaced with gravel. Between Timpie and Delle eight miles were graded in December, 1915. Just south of Stockton three miles were graded in November and December, 1915. At St. John one and three-fourths miles were surfaced with gravel in June and July, 1916, of which amount a two-thirds of a mile stretch was graded in June previous to the surfacing. A one-fourth mile stretch was also surfaced in December, 1915, at a point about three miles east of St. John.

The grading of the Wendover road was no doubt the most interesting and far reaching project which was undertaken in the County during the biennium. Grading was commenced at Knolls, the west edge of the Great Salt Lake Desert, in September, 1915. The work proceeded in a due westerly direction, paralleling the Western Pacific Railroad, and located just outside of the north right of way line of said raliroad. The

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$41,917.77</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 4,585.66</i>
	<i>\$37,332.11</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 2,811.94</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$40,144.05</i>

TOOELE COUNTY

progress of the tractor and grader work amounted to four miles in September, sixteen miles in October and five and one-half miles in November. At this point half way between Arinosa and Salduro, a muddy salt marsh was encountered which could not be worked with tractors and graders, therefore the organization moved about fifteen miles westward to Wendover from whence they continued the work in an easterly direction for five miles in the remainder of the month of November, thereby concluding their work for the 1915 construction season.

In April, May and June, 1916, the four miles of road just east of Wendover were surfaced with gravel. During June, July, August, September and October of 1916, the work was concentrated on that portion of the road lying about three miles east of Salduro. Here the natural material is in a muddy or marshy state throughout the year, such that a special derrick excavator with clam shell bucket and steam power was rigged up to handle the grading at this point. To date just about one mile of grading has been accomplished by this method at the place mentioned. It is the intention of the Commission to surface with gravel the entire road crossing the desert at some time in the future. Private contributions were largely responsible for the work so far accomplished on the Wendover road.

The work of spanning the Great American Desert with a highway is quite a novel and interesting undertaking. From the middle of the vast area one sees a carpet of pure salt crystals extending out in every direction, from one horizon to the other. The waste is practically flat and the new roadway is parallel to the railroad, the alignment of which is perfectly straight for a distance of fifty miles. This is probably the longest straight roadway in the world having such a level and even profile. No surveying was necessary for this project. The alignment was fixed by the railroad and the grade was fixed by nature.

The following roads were officially designated as State Roads during the past biennium: The road from Timpie via Knolls and Salduro to Wendover was designated August 24, 1915. The road from Wendover southwardly to Ipapah and thence southwestwardly to the Nevada line was designated December 20, 1915. The road extending from the Salt Lake

TOOELE COUNTY

County line near Garfield to Clover via Lake Point, Morris, Erda, Tooele, Stockton and St. John was designated December 21, 1915. The road from Clover south to Vernon was also designated December 21, 1915. The road from Vernon south toward Boulter Station to the Juab County line was designated March 13, 1916.

In 1916, a twenty-nine-foot span wood-stringer bridge was constructed over a slough on the Wendover Road. The slough comes from Skull Valley and intersects the road midway between Timpie and Delle. The abutments are of log cribs filled with stone. No bridges were constructed in Tooele County in 1915.

Ninety-six culverts were constructed in Tooele County during the past biennium, eighty-four in 1915, and twelve in 1916. Of these, fifty-eight were constructed of wood, twenty-five of reinforced concrete, and fourteen of corrugated iron pipe. It will be noticed that comparatively few metal culverts are used due to the predominance of alkali in the northern part of the county. It is also of interest to note that a great number of wood culverts were built from the drift lumber which washes ashore from Great Salt Lake. Lumber was also shipped from Salt Lake to the Wendover Road for the purpose of building culverts. The wood remains in a good state of preservation almost indefinitely in the presence of the desert salt.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work was accomplished in Tooele County during the past biennium, as will be noted in the accompanying tables.

TOOELE COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
TOOELE COUNTY
1915-1916.**

RECEIPTS**State Appropriations:****Balance State Appropriation on Hand**

Dec. 1, 1914.....	\$ 1,124.82	
1915-1916 State Appropriations.....	11,064.28	
Motor Vehicle Fee Fund.....	118.92	\$12,308.02

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ 1,000.00
1915-1916 County Appropriations....	9,464.28
Balance Road Tax on Hand Dec. 1, 1914	4,106.63
1913 State Road Tax Collections Date of Levy to Final Settlement.....	12,691.64
1915 State Road Tax Collections Date of Levy to Final Settlement.....	6,010.37
Additional Collections 1910 State Road Tax Final Settlement to Dec. 1, 1916	31.27
Additional Collections 1911 State Road Tax Final Settlement to Dec. 1, 1916	50.59
Additional Collections 1912 State Road Tax Final Settlement to Dec. 1, 1916	50.24
Additional Collections 1913 State Road Tax Final Settlement to Dec. 1, 1916	3.27
	<u>\$33,408.29</u>

Less Deductions Account of Error in Original Report of 1911 Tax Collections45	33,407.84
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City Appropriations:

1916 Grantsville City. This Appropri- ation Made to Get 1916 \$1,600 of State Appropriation	\$ 2,000.00
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Wendover Improvement Committee:

*1915 Appropriation	\$ 2,535.72	\$50,25
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**In addition to above, Wendover Improvement Committee appropriated in \$2,264.28; in 1916, \$4,500.00. These two amounts, however, were remitted thru Tooele County Auditor's office in order to assist Tooele County to obtain 1915 and State Appropriations listed above.*

TOOELE COUNTY

DISBURSEMENTS

State Appropriation Fund.....	\$12,157.73	
County Appropriation Fund.....	9,944.78	
Special State Road Tax Levy....	15,224.24	
Motor Vehicle Fee Fund.....	118.92	
City Appropriation	1,936.38	
Wendover Improvement Committee Fund	2,535.72	\$41,917.77
Gross Balance Dec. 1, 1916.....		\$ 8,333.81
Less Unpaid Labor and Purchases...		2,811.94
Net Balance Dec. 1, 1916.....		\$ 5,521.87

STATEMENT OF ROAD TAX LEVIES.

	Year	Taxable Valuation	Mills	Loss in Fractions	Levy
County	1915	\$ 6,493,124.00	1	0.43	\$ 6,492.69
County	1916	15,109,079.00	0.3	0.36	4,532.36
Grantsville City	1916	536,164.00	2	0.22	1,072.10

TOOELE COUNTY

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TOOELE COUNTY

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TOOELE COUNTY

TOOELE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
GRANTSVILLE								Cor. Iron	4	16"	16		
								Cor. Iron	6	18"	16		
								Cor. Iron	1	24"	24		
								Concrete	10	2'x2'	24		
								Concrete	8	3'x2'	25		
								Concrete	6	3'x3'	24	\$ 2,310.53	\$ 66.02
STOCKTON WENDOVER ROAD								Cor. Iron	2	16"	16	31.76	15.88
								Wood	9	16"x30"	16		
								Wood	36	16"x48"	16		
								Wood	2	16"x60"	16	960.74	20.44
TOTAL									84			\$ 3,308.03	\$ 39.32

TOOELE COUNTY

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ROAD	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
GRANTSVILLE-TIMPIE								Concrete	1	4½'x1½'	30	\$ 43.00	\$ 43.00
TOOELE-JUAB								Wood	1	3'x2'	20		
								Cor. Iron	1	24"	24	113.60	56.80
TOOELE-SALT LAKE								Wood	1	2'x1'	20	2.50	2.50
WENDOVER ROAD	Slough	Wood Stringer	Log Crib and Stone	29	20	All	\$ 145.05	Wood	5	2'x3'	16		
								Wood	2	2'x4'	16		
								Wood	1	8'-span	16		
								Wood	1	10'-span	16	327.53	36.39
TOTAL							\$ 145.05		13			\$ 486.63	\$ 37.43

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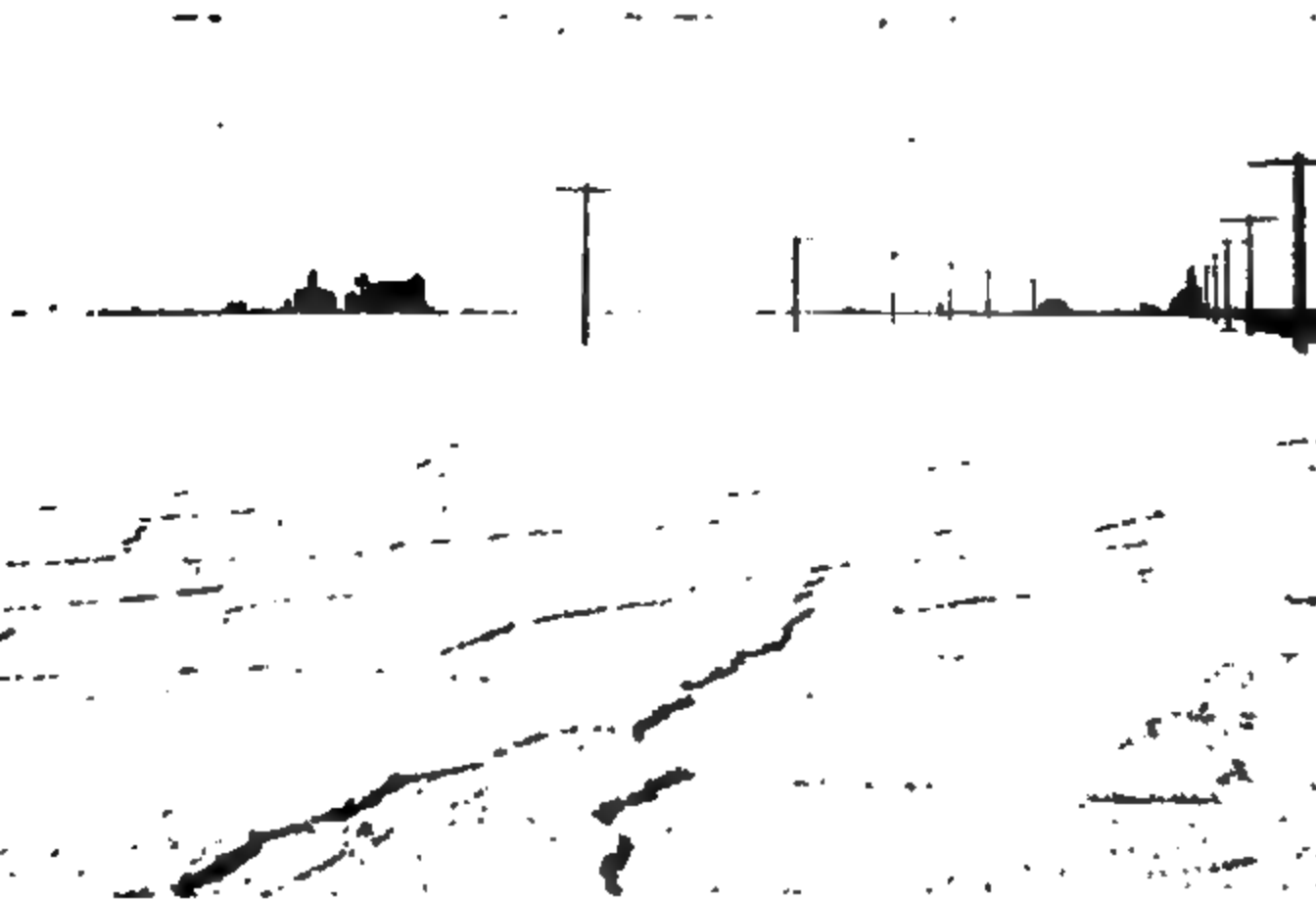
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TOOELE COUNTY

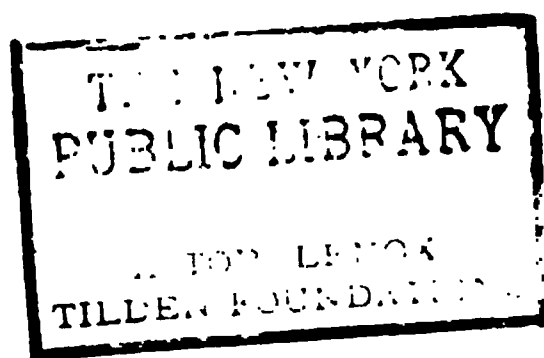
**(Tooele No. 8.) Grading Work in Construction on the Salt Flats
on the Wendover Road.**



(Tooele No. 12.) Typical View of Salt Formation on the Great Salt Lake Desert.

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TILDEN FOUNDATIONS



UINTA COUNTY

At the beginning of the biennium there was the net sum of \$7,427.49 remaining in the State Road Fund available for use in Uinta County. During the biennium the State appropriated \$9,464.28, the County appropriated \$4,732.14, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$8,775.12 by Special Road Tax Levy, making a total of \$30,517.95, which has been available for road construction. From this sum \$20,152.04* has been expended, leaving a net balance of \$10,365.91 on hand.

The road work completed in Uinta County in the fourth biennium (1915-1916) is as follows: Just west of Fort Duchesne one-fourth mile was graded in May, 1915, two miles were graded in June, 1915, and a stretch of eight-tens of a mile at a location about half way between Fort Duchesne and Roosevelt was surfaced with red clay in November, 1916. Just east of Moffat a one-half mile stretch and a three-fourths mile stretch were graded in October, 1915, and in November, 1916, one-half mile of the three-fourths mile stretch was surfaced with red clay shale. In April, 1915, and October and November, 1916, a stretch of road thirteen and one-half miles long extending southwestwardly from Vernal was graded. In June, 1915, a half mile stretch was graded at a point five miles west of Jensen, and a small stretch of 360 feet was graded in the city of Vernal in May, 1915.

The road from Jensen southeastwardly to Cockleburrr Ranch, thence eastwardly along Cliff Creek to the Colorado line at Kay Ranch was officially designated as a State Road December 21, 1915.

In 1915, two bridges of importance were constructed, the Ouray Canal bridge and the Ashley Creek bridge. The Ouray Canal bridge is a log-stringer structure of fifteen-foot span with masonry abutments. The Ashley Creek bridge is a stand-

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$16,068.53</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 1,159.18</i>
	<i>\$14,909.40</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 5,242.64</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$20,152.04</i>

UINTA COUNTY

ard fifty-foot wood-truss bridge on stone abutments. Both bridges have roadways sixteen feet wide in the clear. No bridges were constructed in 1916.

Thirty-seven culverts were constructed in Uinta County during the past biennium, sixteen in 1915 and twenty-one in 1916. Of those constructed, fifteen are of stone masonry, eleven are of corrugated iron, eight are of wood and three of stone and wood.

Considerable repairing, dragging and other maintenance and miscellaneous work was done throughout the county as will be noted in the accompanying tables.

UINTA COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS

IN
UINTA COUNTY

1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$	368.31
1915-1916 State Appropriations.....		9,464.28
Motor Vehicle Fee Fund.....	118.92	\$ 9,951.51

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$	1,016.53		
1915-1916 County Appropriations.....		4,732.14		
Balance Road Tax on Hand Dec. 1, 1914		7,201.78		
1915 State Road Tax Collections Date of Levy to Final Settlement.....		2,304.62		
1916 State Road Tax Collections Date of Levy to Nov. 30, 1916.....	6,470.50	21,725.57	\$31,677.08	

DISBURSEMENTS.

State Appropriation Fund	\$	7,188.00	
County Appropriation Fund.....		1,014.07	
Special State Road Tax Levy.....		7,747.54	
Motor Vehicle Fee Fund.....	118.92		\$16,068.53
Gross Balance Dec. 1, 1916.....			\$15,608.55
Less Unpaid Labor and Purchases...			5,242.64
Net Balance Dec. 1, 1916.....			\$10,365.91

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 2,630,695.00	1	....	\$ 2,630.69
1916	5,384,624.00	2	2.17	10,767.07

UINTA COUNTY

UINTA COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
JENSEN-COLORADO	17.5											
VERNAL-DUCHESNE	30.5	25-30	13.0	\$ 347.24	\$ 25.89	30	Clay-Shale Clay	12	9	0.49	\$ 994.10	\$ 770.62
		30	0.41			12		9	0.80			
VERNAL-JENSEN	15.5											
TOTAL	63.5		13.41	\$ 347.24	\$ 25.89					1.29	\$ 994.10	\$ 770.62

UINTA COUNTY

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UINTA COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
NAPLES								Cor. Iron	1	16"	20		
								Cor. Iron	1	30"	18		
								Wood	1	1'x1½'	16		
								Wood	1	1½'x2'	16	\$ 73.97	\$ 18.49
RANDLETT	Ouray Canal	Log Stringer	Stone	15	16	All	\$ 230.78	Stone-wood	1	4'x10'	16		
			Masonry					Stone	1	3'x27½'	26		
								Stone	1	3'x31½'	25	158.35	52.78
RIVERDALE	Ashley Creek	Wood Truss	Stone	50	16	All	3,428.33	Cor. Iron	1	12"	15		
								Wood	1	10"x10"	20		
								Stone	1	3'x31½'	30	137.98	45.99
VERNAL								Cor. Iron	1	12"	20		
								Cor. Iron	5	16"	71	551.91	91.98
NAPLES AND RIVERDALE	Big Wash No. 4..	Log Truss	Masonry	30	16	Eng'g.	92.88						
TOTAL							\$3,751.49		16			\$ 922.21	\$ 57.64

ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
VERNAL-DUCHESNE								Wood Stone Stone-wood Stone-wood Stone Stone	1 1 1 1 1 2	10"x18" 2½'x3' 3'x4' 5'x10' 2'x2' 2'x2½'	16 60 30 16 18 18	\$ 757.62	\$108.23
VERNAL-JENSEN	Ashley Creek					Painting	\$ 12.00	Cor. Iron Cor. Iron Wood Wood Wood Wood Stone-wood Stone Stone Stone Stone	1 1 1 1 1 1 2 1 3 1 1	12" 24" 16"x16" 16"x18" 18"x18" 20"x5" 5'x10' 18"x2' 2'x2' 2'x2½' 2'x3½'	20 20 16 20 16 16 16 16 18 18 18	424.32	30.31
TOTAL							\$ 12.00		21			\$ 1,181.94	\$ 56.23

UTAH COUNTY

At the beginning of the biennium there was no balance remaining in the State Road Fund available for use in Utah County. During the biennium the State appropriated \$11,064.28, the County appropriated \$11,064.28, the Motor Vehicle Fee Fund amounted to \$118.92, Lehi, Payson, Pleasant Grove, Provo, Salem, Santaquin and Spanish Fork raised \$8,126.06, and the County raised \$42,732.03 by Special Road Tax Levy, making a total of \$73,105.57, which has been available for road construction. From this sum \$70,940.41* has been expended leaving a net balance of \$2,165.16 on hand.

The road work accomplished in Utah County during the past biennium consists of the following: In the south end of Payson one-half mile was graded and surfaced with gravel in December, 1915. Half way between Payson and Santaquin one mile was surfaced with gravel in October and December, 1915, and a small stretch of one-fourth mile was graded in September, 1915. Between Santaquin and Goshen five miles were graded in August, September, October, November and December, 1915, of which four miles were surfaced with gravel during the same period. Nearly all of the road extending westwardly from Elberta to the Juab County line was improved during the past biennium. Eleven miles were graded in November, 1915, and April, May and June, 1916. The two miles just west of Elberta were surfaced with gravel in September, 1916.

The remainder of the road work was purely surfacing, the grade having been previously perfected. Just north of Benjamin one and one-half miles were surfaced with gravel in August and September, 1916. Between Salem and Spanish Fork two and one-half miles were surfaced with gravel in August, September and October, 1915. Between Spanish Fork and Springville four miles were surfaced with sand,

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$66,485.46</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 1,238.18</i>
	<i>\$65,197.28</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 5,743.13</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$70,940.41</i>

UTAH COUNTY

gravel and oil in May, June, August and September, 1916. Between Springville and Provo about four miles were surfaced with gravel and subsequently oil or Tarvia was applied for a binder, all in the months of April, May, June, July and August, 1915. In December, 1915, two strips aggregating one and one-half miles in the city of Provo were surfaced with gravel. Just north of Provo one mile was surfaced with shale in January, 1916. Between Delta and Pleasant Grove six miles were surfaced with various materials throughout the 1916 construction season, and in August and September the whole stretch was surfaced with oil and gravel. Between American Fork and Lehi two and one-half miles were surfaced with Tarvia "B" in August, 1915, and one-half mile was surfaced with gravel in the city of Lehi in December, 1915. Just west of Lehi one and one-half miles were surfaced with gravel in December, 1915.

A concrete pavement was constructed in the city of Provo in October and November, 1915, and April and May, 1916. The work consisted of the pavement of Center Street from Fifth West to Academy Ave., a distance of approximately one-half mile. The State's portion consisted of a strip nine feet wide extending along both sides of the street and adjoining the street railway company's right of way. The State's portion included also the paving of the street intersections. The project was financed conjointly by the City, the County and the State. The engineering and supervision was handled by the City Engineer in conjunction with the State Road Commission. The work was let by contract to Ryberg Brothers, contractors, and the work was executed under the supervision and inspection of an engineer from the State Road Commission.

The following roads were officially designated as State Roads during the past biennium: The road extending from Lehi west to the Jordan River was designated June 28, 1915. The road from Springville to Mapleton thence south to intersect the Spanish Fork-Thistle Road was designated May 8, 1916. The road from Spanish Fork to Payson via Benjamin, and the road from Provo to Pleasant Grove via Lake View

UTAH COUNTY

and Vineyard, and the road from Lehi to the Tooele County line via Cedar Fort and Fairfield, were also designated May 8, 1916.

In the summer of 1915 the Salt Lake and Utah Railroad Co. projected their interurban line through the city of Springville, thereby necessitating a reinforcement of the Hobble Creek bridge in order to withstand the additional loading of the railroad traffic. The proposed plans for reinforcing the bridge beneath the railroad bed were submitted to the State Road Commission for approval. The design was checked and corrected and the construction was done by the railroad company under the inspection of a representative of the State Road Commission.

In 1915 a twelve-foot span reinforced concrete structure was constructed over the Spanish Fork Canal. The canal is covered by the bridge for the full width of the roadway, 142 feet. Over one end of the bridge the Salt Lake and Utah Railroad crosses, at which point the structure is designed for greater loading. The structure was drawn up by the Railroad Company in accordance with the standard designs of the State Road Commission, and was constructed by the railroad company under the inspection of the State Road Commission. The County performed the excavation work and the expense of the structure was divided by the State Road Commission and the railroad company. No bridges were constructed in 1916 on the State Roads in Utah County.

Sixty-nine culverts were constructed during past biennium in Utah County, nineteen in 1915 and fifty in 1916. Of those constructed, fifty-four are of reinforced concrete, eight of corrugated iron pipe, five of wood, one of stone and one of stone with wood top.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work was accomplished in Utah County during the past biennium, as will be noted in the accompanying tables.

UTAH COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS IN UTAH COUNTY 1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	77.23	
1915-1916 State Appropriations.....		11,064.28	
Motor Vehicle Fee Fund.....		118.92	\$11,260.43

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$	337.72	
1915-1916 County Appropriations....		11,064.28	
Balance Road Tax on Hand Dec. 1,			
1914		823.23	
1915 State Road Tax Collections Date			
of Levy to Final Settlement.....		32,622.42	
1916 State Road Tax Collections			
Remitted to Dec. 1, 1916.....		10,000.00	
Additional Collections 1912 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		7.17	
Additional Collections 1913 State			
Road Tax Dec. 1, 1914, to Dec. 1,			
1916		102.44	54,957.26

City Tax Levies:

1915 Lehi State Road Tax Collections			
Date of Levy to Final Settlement..	\$	582.52	
1915 Payson State Road Tax Collec-			
tions Date of Levy to Final Settle-			
ment		445.83	
1915 Pleasant Grove State Road Tax			
Collections Date of Levy to Final			
Settlement		312.51	
1915 Provo State Road Tax Collec-			
tions Date of Levy to Final Settle-			
ment		6,074.20	
1915 Salem State Road Tax Collec-			
tions Date of Levy to Final Settle-			
ment		69.93	
1915 Santaquin State Road Tax Col-			
lections Date of Levy to Final			
Settlement		155.82	
1915 Spanish Fork State Road Tax			
Collections Date of Levy to Final			
Settlement		485.25	8,126.06
			\$74,343.75

UTAH COUNTY

DISBURSEMENTS

State Appropriation Fund.....	\$ 9,787.41	
County Appropriation Fund.....	11,247.41	
County Special State Road Tax Levy	38,754.27	
Motor Vehicle Appropriation.....	118.92	
Lehi City State Road Tax.....	582.52	
Payson City State Road Tax.....	445.83	
Provo City State Road Tax.....	5,013.85	
Spanish Fork State Road Tax.....	485.25	\$66,435.46
Gross Balance Dec. 1, 1916.....		\$ 7,908.29
Less Unpaid Labor and Purchases...		5,743.13
Net Balance Dec. 1, 1916.....		\$ 2,165.16

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$17,096,919.00	2	....	\$34,193.83
1916	39,659,231.00	$\frac{3}{4}$	....	31,727.36

1915 The following cities put on a tax levy for State Road purposes:—Lehi, Payson, Pleasant Grove, Provo, Salem, Santaquin and Spanish Fork.

1916 The following cities put on a tax levy for State Road purposes:—American Fork, Lehi, Pleasant Grove, Provo, Spanish Fork and Springville.

Unable to get a report from County Treasurer of valuations, etc., of cities in time for this report.

UTAH COUNTY

UTAH COUNTY

1880

UTAH COUNTY

UTAH COUNTY

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UTAH COUNTY

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UTAH COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
COLTON								Cor. Iron Wood	1	•	•	\$ 33.14	\$ 11.05
GOSHEN								Cor. Iron	2				
								Cor. Iron Wood	2	12" 14"	24 30		
PROVO BENCH								Wood	1	•	•	\$ 148.43	\$ 29.69
SANTAQUIN								Concrete	1	4'x2'	34	130.12	130.12
								Concrete	2	1'x1'	20		
								Concrete	1	3'x2' 4'x3'	20 30	105.91	26.48
SPANISH FORK	Spanish Fork Canal	Concrete Slab	Concrete	12	142	All	\$ 813.63	Concrete	1	3'x2'	38	3.81	3.81
SPRING LAKE								Concrete	1	3'x2'	40	†	
SPRINGVILLE								Concrete	1	3'x2'			
THISTLE								Wood	1	†	‡	78.49	39.25
TUCKER								Cor. Iron	1	•	•		
								Wood	1	•	•	33.13	16.56
TOTAL							\$ 813.63		19			\$ 533.03	\$ 28.05

*This is one-half of the cost of the Bridge, the other half being paid by the Salt Lake & Utah Railroad.

†Material and dimensions not reported.

‡Cost not segregated.

§Dimensions not reported.

*This is one-half of the cost of the Bridge, the other half being paid by the Salt Lake & Utah Railroad.
†Material and dimensions not reported.
‡Cost not segregated.
§Dimensions not reported.

UTAH COUNTY

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UTAH COUNTY

h. 89.) Concrete Pavement in the City of Provo in Course of Construction.

h No. 78.) Roadway near Spanish Fork having been Treated with Oil.

(*Utah No. 87.*) **Spanish Fork Road, Showing Effect of Dragging
Immediately after Sprinkling.**

UTAH COUNTY

**ash No. 57.) Spanish Fork Canal Bridge under Construction, Showing Placing
of Reinforcement in the Floor Slab.**

**(Utah No. 34.) Reinforced Superstructure of Hobble Creek Bridge to
Accommodate Salt Lake and Utah Railroad.**

THE NEW
PUBLIC
ASTOR
TILDEN

BILL OF MATERIALS

SUPERSTRUCTURE

FE: AS-4 MIX

Concrete 36 cu yds.
Gravel 84 bbls.
Sand 24 cu yds.
ST - -

Grade	45'-6" long	167.8 lbs.
"	12'-11"	678.1 "
"	45'-0"	1821.9 "
"	45'-0"	1065.6 "
"	10'-0"	1776.8 "
"	10'-0"	844.3 "
"	10'-10"	8890.4 "
		Total 8846 lbs.

ABUTTMENT NO. 1 (See Design 11-72)

FE: AS-4 MIX

Concrete 31 cu yds.
Gravel 36.3 bbls.
Sand 16 cu yds.
ST - -

Grade	17'-0" long	1154.1 lbs.
"	12'-0"	81.8 "
"	7'-0"	61.0 "
"	7'-0"	37.2 "
"	8'-0"	103.4 "
"	16'-0"	262.7 "
"	7'-0"	83.6 "
"	14'-0"	142.8 "
"	44'-0"	848.5 "
"	17'-0"	887.2 "
		Total 3444 lbs.

Refer 11-72 for Abutment dimensions.
See Book 10.109 Page 27.
Refer 11-105 for sketch of bridge site.
No. 4100.
Reinforcing bars are placed 45° with $\frac{1}{2}$ ".

<p>STATE OF TEXAS COUNTY OF DALLAS CITY OF DALLAS BRIDGE DIVISION 1100 NORTH GILLESPIE STREET DALLAS, TEXAS 75202</p>	
<p>Project No. 11-72 Drawn by J. L. Smith Checked by J. L. Smith Approved by J. L. Smith</p>	<p>Date 11-72 Scale 1" = 10'-0" Sheet 1 of 1</p>
<p>D-83</p>	

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WASATCH COUNTY

At the beginning of the biennium there was a deficit of \$440.73 in the State Road Fund of Wasatch County. During the biennium the State appropriated \$11,064.27, the County appropriated \$5,532.14, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$5,680.62 by Special Road Tax Levy, making a total of \$21,955.22, which has been available for road construction. From this sum \$16,959.17* has been expended, leaving a net balance of \$4,996.05 on hand.

The surfacing of the road between Heber and Midway was commenced in November of 1915. Most of the work was completed in 1916. Quartzite was used as the surfacing material for two miles of this road and gravel was used for the other mile.

Just north of Heber a stretch of road one and one-quarter miles long was graded, also about one-half mile at Riverdale and about one mile just south of Elkhorn. About half a mile of the road between Heber and Elkhorn was surfaced with shale. The grading work mentioned was done in small strips throughout the biennium.

In May, 1915, one and one-half miles of the canyon road leading from Elkhorn to Park City were graded near the summit.

In 1916, the road just south of Charleston was improved for a distance of four miles. Two and one-half miles were graded, and one and one-half miles were surfaced with quartzite.

On the road from Heber to Duchesne County a total of six miles of road was graded. The work was done in about seventeen small stretches of not more than a mile each, distributed along the full length of the road. One short stretch of 600 feet was surfaced. In addition to this work the U. S. Forest Service graded two small stretches aggregating one

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	\$15,389.50
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	\$ 2,787.12
	\$12,552.38
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	\$ 4,406.79
<i>Total Expenditures during the Fourth Biennium.....</i>	\$16,959.17

WASATCH COUNTY

and eight-tenths miles on that part of the road which runs through the Uinta National Forest.

On the project just mentioned the federal government spent \$959.33 on 31 miles of survey, and \$1,899.00 on one and three-tenths miles of construction in 1915. In 1916 they spent \$1,324.97 on construction and \$215.66 on seven miles of survey.

Sixty-four culverts were constructed in Wasatch County during the past biennium, nine in 1915 and fifty-five in 1916. Of those constructed, fifty-five are of corrugated iron pipe and nine are of wood. No bridges were constructed during the biennium.

Considerable repairing, dragging of roads and other maintenance and miscellaneous work was accomplished; as will be noted in the accompanying tables.

WASATCH COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
WASATCH COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	198.95	
1915-1916 State Appropriations.....		11,064.27	
Motor Vehicle Fee Fund.....		118.92	\$11,382.14

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$	23.39		
1915-1916 County Appropriations....		5,532.14		
Balance Road Tax on Hand Dec. 1, 1914		2,124.05		
1915 State Road Tax Collections Date of Levy to April 12, 1916.....		5,543.48		
Additional Collections 1911 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		7.35		
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		30.91		
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		53.82		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		15.96		
1915 Collections on Transient Herds to Dec. 1, 1916.....		29.10	13,360.20	\$24,742.34

DISBURSEMENTS.

State Appropriation Fund.....	\$	9,401.63	
County Appropriation Fund.....		2,149.70	
Special State Road Tax Levy.....		3,669.25	
Motor Vehicle Fee Fund.....		118.92	\$15,339.50
Gross Balance Dec. 1, 1916.....			\$ 9,402.84
Less Unpaid Labor and Purchases...			4,406.79
Net Balance Dec. 1, 1916.....			\$ 4,996.05

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 1,900,695.00	3	\$ 5,702.08
1916	4,331,143.00	1½	6,496.71

WASATCH COUNTY

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WASATCH COUNTY—ROAD CONSTRUCTION, 1915.

PRECINCT	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
CHARLESTON	10.0	*	*	\$ 111.46								
DANIELS	14.7	12	2.96	1,660.70	\$ 561.06			*	*	*	\$ 128.75	
ELKHORN	15.0	12	1.50	101.00	67.33			*	*	*	36.00	
FRUITLAND	23.3											
HEBER	10.0	20 24	0.08 1.06	359.61	315.45	20	Gravel	12	10	0.79	1,245.86	1,577.04
MIDWAY	1.2											
RIVERDALE	4.1	24	0.30	32.00	106.67	16	Shale	, 9	6	0.15	†	.
TOTAL	78.3		59.0	\$ 2,264.77	\$ 383.86					0.94	\$ 1,410.61	\$ 1,500.65

*Mileage not reported.

†Cost not segregated.

WASATCH COUNTY

WASATCH COUNTY—ROAD CONSTRUCTION, 1916.												
ROAD	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Cost per Mile
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	
HEBER-DUCHESNE	41.0	14 16 24	1.01 0.47 1.75	\$ 1,841.60	\$ 570.15	24	Shale	12	10	0.11	\$ 61.50	\$ 559.08
HEBER-MIDWAY	3.2					20 24 24 24	Shale Shale Shale Shale	12 12 14 14	8 10 10 24	0.19 0.55 0.45 0.08	2,506.19	1,853.26
HEBER-PARK CITY	11.1	14 24	1.34 0.17	372.00	246.36	18 24	Shale Shale	12 12	10 10	0.28 0.19	704.50	1,677.38
HEBER-UTAH	13.0	14 24	0.11 2.61	2,001.46	736.83	24 24	Shale Shale	10 10	8 10	0.40 0.75	667.50	553.52
PARK CITY-KAMAS	10.0											
TOTAL	78.3		7.46	\$ 4,215.06	\$ 565.02					3.07	\$ 3,929.09	\$ 1,280.03

WASATCH COUNTY

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WASATCH COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
CHARLESTON								*Cor. Iron	2	8"	14		
DANIEL								*Cor. Iron	1	18"	18		
ELKHORN								*Cor. Iron	2	8"	12		
HEBER								*Cor. Iron	1	15"	18		
								Wood	1	2'x3'	28	\$ 141.90	\$ 35.48
								*Cor. Iron	1	15"	18		
								*Cor. Iron	1	12"	18		
TOTAL								.	9			\$ 141.90	\$ 15.77

*Culverts not furnished by State.

*Culverts not furnished by State.

WASHINGTON COUNTY

At the beginning of the biennium there was the net sum of \$1,303.50 remaining in the State Road Fund available for use in Washington County. During the biennium the State appropriated \$11,064.27, the County appropriated \$2,366.07, the Motor Vehicle Fee Fund amounted to \$118.92 and the County raised \$2,377.38 by Special Road Tax Levy, making a total of \$17,230.14, which has been available for road construction. From this sum \$14,377.83* has been expended leaving a net balance of \$2,852.31 on hand.

The road construction work in Washington County during the past biennium is, as follows: Two and three-fourths miles of roadway just north of Bellevue were surfaced with lime shale in March and April, 1915, and two and one-half miles just south of Bellevue were surfaced with lime shale in April and May, 1915. Also in March, April and May, 1915, about a mile of the road lying three miles north of Bellevue was graded. From Toquerville to Hurricane, a distance of six miles, and for two miles beyond Hurricane in a southeasterly direction, the road was graded in December, 1914, and January, February and March, 1915. This represents all of the road work accomplished in Washington County with the exception of a small amount of surfacing just north of Leeds in July and August, 1916.

In August and September of 1916, four and one-fourth miles of road were surfaced with clay between St. George and Washington, and one and one-four miles were surfaced with clay between Santa Clara and Shem in November of the same year.

The road from Shem southwestwardly toward Littlefield, Arizona, to the Arizona line was designated as a State Road March 24, 1916.

In the spring of 1915 two steel truss bridges were erected

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$13,955.57</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 965.98</i>
	<i>\$12,989.64</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 1,388.19</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$14,377.83</i>

WASHINGTON COUNTY

over Ash Creek, one at Toquerville and one at Bellevue. The abutments for both bridges were constructed of concrete with extra coarse aggregate so mixed as to give a strong and dense construction at a minimum cost. The steel for both bridges was obtained from Sevier County. The sixty-two-foot span superstructure used for the Toquerville bridge is a pin-connected steel truss bridge designed originally for the Salina-Redmond site. A second fabrication was necessary for this latter bridge, however, due to the abutments having been constructed on a skew. The original steel was therefore, left on hand and later transferred to Washington County in 1915. The steel trusses used on the Bellevue bridge are of the rivted type and are fifty-two feet in span. This superstructure was designed for the Salina-Sevier bridge just west of Salina but was not used at that point on account of the span being too small to accommodate the river. This steel was also transferred to Washington County in 1915. The Toquerville bridge is somewhat lighter than the present standard of the Commission, having been designed as early as March, 1912.

A twenty-five-foot wood-truss bridge of standard design was constructed over South Ash Creek in 1915. The abutments were constructed of masonry. The Grape Vine bridge near Leeds, having been one-fourth constructed in 1914, was completed in 1916. This bridge is of wood, on concrete abutments, and has a span of sixteen feet.

Twenty-four culverts were constructed in Washington County during the past biennium, twenty-one in 1915 and three in 1916. Twenty-two of these culverts were constructed of stone masonry, one of corrugated iron, and one of stone with wood top.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Washington County during the past biennium, as will be noted in the accompanying tables.

The State convicts were in Washington County at the beginning of the biennium and they remained there until June 1, 1915. During that time they worked principally on road construction and repairs, while part of their time was

WASHINGTON COUNTY

oted to the construction of the Bellevue and South Ash
ek bridges, which were constructed entirely by convict
or, under the direction of an engineer from the State
id Commission.

WASHINGTON COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS IN WASHINGTON COUNTY 1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand			
Dec. 1, 1914.....	\$	248.09	
1915-1916 State Appropriations.....		11,064.27	
Motor Vehicle Fee Fund.....		118.92	\$11,431.28

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$	19.07*		
1915-1916 County Appropriations....		2,366.07		
Balance Road Tax on Hand Dec. 1, 1914		2,002.27		
1915 State Road Tax Collections Date of Levy to Feb. 29, 1916.....		2,371.50		
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916		1.57		
Additional Collections 1913 State Road Tax Dec. 31, 1913, to Dec. 1, 1916		2.07		
Additional Collections 1915 State Road Tax Feb. 29, 1916, to Nov. 30, 1916		2.26		
	\$	6,764.81		
Less Deduction Account of Error in Original Report of 1912 Collections		.02	6,764.79	\$18,196.07

DISBURSEMENTS.

State Appropriation Fund.....	\$	9,558.31	
County Appropriation Fund.....		995.70	
Special State Road Tax Levy.....		3,282.64	
Motor Vehicle Fee Fund.....		118.92	\$13,955.57
Gross Balance Dec. 1, 1916.....			\$ 4,240.50
Less Unpaid Labor and Purchases...			1,388.19
Net Balance Dec. 1, 1916.....			\$ 2,852.31

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 1,216,439.00	2	....	\$ 2,432.88
1916	1,996,309.00	1½	....	2,994.46

*A disbursement of \$18.56 was made subsequent to the closing of the Third Biennium books making this balance \$19.07 instead of \$37.63. An apparent difference of \$18.56 will therefore exist between the balances indicated in the two reports.

WASHINGTON COUNTY

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WASHINGTON COUNTY—ROAD CONSTRUCTION, 1916.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
ANDERSON-HURRICANE	10.3											
ANDERSON-IRON	15.4											
HURRICANE-ARIZONA	24.2											
LA VERKIN-ZION'S CANYON	22.0											
ST. GEORGE-ANDERSON	22.7					30	Clay	10	3	4.25	\$ 1,423.75	\$ 335.00
ST. GEORGE-ARIZONA	30.0					30	Clay	10	3	1.25	461.00	368.80
TOTAL	124.6									5.50	\$ 1,884.75	\$ 242.00

WASHINGTON COUNTY

WASHINGTON COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span In Feet	Width of Roadway In Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length In Feet	Expenditures	Average Cost per Culvert
HURRICANE TOQUERVILLE	Toquerville	Steel Truss	Concrete	62	16	All	\$1,959.33	Stone	3	2'x2'	26	•	
	Bellevue	Steel Truss	Concrete	52	16	All	1,590.22	Stone	13	2'x2'	23		
	South Ash Creek	Wood Truss	Stone	25	16	All	464.30	Stone	2	2½'x2'	31		
								Stone	1	3'x3'	22	•	
								Stone	1	4'x4'	40		
TOTAL							\$4,013.85	Stone	1	6'x3'	22	28.80	1.60
									21			\$ 28.80	\$ 1.87

*Work done by convict labor.

WASHINGTON COUNTY

WASHINGTON COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.

ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
ANDERSON-HURRICANE	La Virkin					Eng'g.	\$ 29.89	Stone-wood	1	2½'x5'	16	\$ 6.00	\$ 6.00
ANDERSON-IRON	Peter Leap Creek					Eng'g.	11.41	Stone Cor. Iron	1	2'x5'	30	50.75	25.28
ST. GEORGE-ANDERSON	Harrisburg					Eng'g.	16.55						
	Cottonwood Creek					Eng'g.	10.84						
	Washington Creek					Eng'g.	22.51						
TOTAL							\$ 91.20		3			\$ 56.75	\$ 18.92

*Material not reported.

WASHINGTON COUNTY

(Washington No. 28.) **Loading Steel at Lund, Utah, for the Construction
of Bellevue Bridge.**

(Washington No. 36.) **Constructing Concrete Abutments for the Toquerville Bridge.**

WASHINGTON COUNTY

(Washington No. 22.) **View Showing Concrete Floor of Bellevue Bridge.**

(Washington No. 21.) **General View of Bellevue Steel Truss Bridge. Span 52 ft.**

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WAYNE COUNTY

At the beginning of the biennium there was the net sum of \$7,567.07 remaining in the State Road Fund available for use in Wayne County. During the biennium the State appropriated \$9,464.27, the County appropriated \$2,366.07, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$2,010.70 by Special Road Tax Levy, making a total of \$21,527.03, which has been available for road construction. From this sum \$15,862.02* has been expended leaving a net balance of \$5,665.01 on hand.

The road work accomplished in Wayne County during the past biennium is as follows: From Loa to Fremont the four miles of road were graded in August, September, October and November, 1916. Just west of Loa two and one-half miles were graded in May and November, 1915, and August, 1916. A half-mile was surfaced with gravel at a point three miles west of Loa in October, 1915. A two-thirds mile stretch just south of Loa was graded in September, 1916. At Lyman a quarter mile stretch was surfaced with gravel in November, 1915, and at Thurber a half-mile of roadway was surfaced with gravel in April, 1915. Also at Thurber a half-mile was graded in August, 1916. At Teasdale one and one-fourth miles were graded in May and November, 1916, of which a quarter of a mile was surfaced with gravel in November, 1916. At Torrey two and one-half miles were graded in August and November, 1916, of which one-third mile was surfaced with gravel in November. At a point half way between Thurber and Teasdale a two-thirds mile stretch was surfaced with gravel and clay in August, 1916. At Junction a half-mile was graded in June, 1915, and at Notom one-third mile was graded in June, 1915. A half-mile stretch between Notom and Caineville was graded in June, 1915. A one-third mile stretch between Caineville and Giles was

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$14,189.70</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 1,505.02</i>
	<i>\$12,684.68</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$ 3,177.34</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$15,862.02</i>

WAYNE COUNTY

graded in August, 1915, and a small stretch of a thousand feet lying about two miles east of Giles was graded in August, 1915.

The road from Cigarette Hollow bridge on the State Road between Thurber and Torrey to the town of Teasdale was designated as a State Road on December 12, 1915. The road from Loa to Fremont was designated on May 24, 1915.

A reinforced concrete slab bridge was constructed at Cigarette Hollow in 1915. The bridge has a span of sixteen feet center to center, and a clear width of roadway of sixteen feet. No bridges were constructed in 1916.

Seventy-eight culverts were constructed during the bien-nium in Wayne County, sixteen in 1915, and sixty-two in 1916. The culverts mentioned were constructed of the following materials, fifty-three of corrugated iron pipe, twenty-three of stone masonry, and two of stone and wood.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Wayne County during the past bien-nium, as will be noted in the accompanying tables.

WAYNE COUNTY

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
WAYNE COUNTY
1915-1916.**

RECEIPTS**State Appropriations:**

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 3,709.64	
1915-1916 State Appropriations.....	9,464.27	
Motor Vehicle Fee Fund.....	118.92	\$13,292.83

County Appropriations and Tax Levies:

Balance County Appropriation on Hand Dec. 1, 1914.....	\$ 1,311.71		
1915-1916 County Appropriations....	2,366.07		
Balance Road Tax on Hand Dec. 1, 1914	4,050.74		
1915 State Road Tax Collections Date of Levy to March 1, 1916.....	1,160.50		
Additional Collections 1911 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	54.39		
Additional Collections 1912 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	18.18		
Additional Collections 1913 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	61.32		
Additional Collections 1914 State Road Tax Dec. 1, 1914, to Dec. 1, 1916	690.78		
Additional Collections 1915 State Road Tax Dec. 31, 1915, to Dec. 1, 1916	25.53	9,739.22	\$23,032.05

DISBURSEMENTS.

State Appropriation Fund	\$11,519.82	
County Appropriation Fund	852.16	
Special State Road Tax Levy.....	1,698.80	
Motor Vehicle Fee Fund.....	118.92	\$14,189.70
Gross Balance Dec. 1, 1916.....		\$ 8,842.35
Less Unpaid Labor and Purchases...		3,177.34
Net Balance Dec. 1, 1916.....		\$ 5,665.01

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$ 424,320.00	3	\$ 1,272.96
1916	949,232.00	1½	1,423.84

WAYNE COUNTY

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WAYNE COUNTY

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WAYNE COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1915.													
PRECINCT	BRIDGES							CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1915	Expenditures During 1915	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
FREMONT								Cor. Iron	6	12"	16		
								Cor. Iron	2	24"	16	\$ 239.65	\$ 29.96
LOA								Cor. Iron	2	24"	17		
								Cor. Iron	1	36"	16	140.29	46.76
LYMAN								Cor. Iron	1	48"	16	121.67	121.67
TEASDALE	Cigarette Hollow.....	Concrete Slab	Concrete	15	16	All	\$ 416.11	Cor. Iron	1	36"	16	108.59	108.59
THURBER								Cor. Iron	1	12"	16		
								Cor. Iron	1	24"	16		
								Stone-wood	1	4'x8'	16	176.84	56.81
TOTAL							\$ 416.11		16			\$ 781.04	\$ 48.81

WAYNE COUNTY

WEBER COUNTY

At the beginning of the biennium there was the net sum of \$7,987.16 remaining in the State Road Fund available for use in Weber County. During the biennium the State appropriated \$9,464.27, the County appropriated \$9,464.27, the Motor Vehicle Fee Fund amounted to \$118.92, and the County raised \$47,864.23 by Special Road Tax Levy, making a total of \$74,898.85, which has been available for road construction. From this sum \$97,873.93* has been expended, leaving a deficit of \$22,975.08.

The road work accomplished in Weber County during the past biennium consists of the following: Three and three-fourths miles of road extending northwestwardly from North Ogden to the Box Elder County line were surfaced with Tarvia "B" in July, 1915, and with Tarvia "A" in May, 1916. The road extending three miles south from North Ogden to Ogden was surfaced with oil and gravel in May, 1916. One and two-thirds miles extending from Ogden to Harrisville were surfaced with oil-macadam in August, 1916. A three-fourths mile stretch just west of Harrisville was graded in June, 1916, and a third mile just to the west of the strip mentioned was surfaced with limestone in January, 1916. At West Weber one-fourth mile was surfaced with Tarvia in June, 1915, and one mile was surfaced with oil-macadam in August, 1916. Between West Weber and Warren one mile was graded and surfaced with gravel in the months of August and September, 1916. At Wilson a small stretch of 500 feet was surfaced with gravel in November, 1916, and one-third mile was graded in June, 1916. At Ogden one-fourth mile was surfaced with Tarvia "B" in June, 1915. At Kaneshville two and one-half miles were graded, of which two miles were surfaced with clay, all in the months of April, May, June, July and August, 1916.

*EXPENDITURES.

<i>Total Disbursements during the Fourth Biennium.....</i>	<i>\$72,886.63</i>
<i>Less Unpaid Labor and Purchases from Third Biennium.....</i>	<i>\$ 1,873.80</i>
	<i>\$71,012.83</i>
<i>Plus Unpaid Labor and Purchases from Fourth Biennium.....</i>	<i>\$26,860.60</i>
<i>Total Expenditures during the Fourth Biennium.....</i>	<i>\$97,873.93</i>

WEBER COUNTY

At Riverdale two and one-fourth miles were surfaced with oil-macadam in June, July and August, 1916.

In Ogden Canyon the entire stretch of roadway from the Ogden City limits to the town of Huntsville was surfaced with Tarvia and oil-macadam during the past biennium. In July, 1915, two and three-fourths miles extending eastwardly from the east city limits of Ogden were surfaced with Tarvia "B" and "X." In June, 1916, this same stretch, also the next two miles extending up the Canyon were surfaced with Tarvia "A," In the same month the four miles additional leading into the town of Huntsville were surfaced with oil and gravel, thereby rendering a total of approximately nine miles of well surfaced canyon highway. Just east of Huntsville a one-third mile stretch was graded in June, 1916.

On April 17, 1916, the State Convicts established camp near Orchard in Weber County. Most of the organization had come from the work in Sevier Canyon, while part of the men were transferred from the work in Parley's Canyon. On April 29, 1916, the pouring of concrete was commenced at the Davis County line near Roy, and the construction of the concrete road proceeded northwardly. During the months of May, June and July, 1916, two and one-half miles of concrete highway were constructed from the Davis County line to Riverdale. The concrete slab is eighteen feet wide, eight inches thick in the center and six inches thick at the edges, having a two-inch parabolic crown to the surface. A very steep grade was encountered just east of the Bamberger Railroad crossing. At this point considerable grading was done, and the profile was brought down to a 5.5 per cent maximum grade. The tangents are long and smooth. Only a few curves are to be found in the road, but some of these are very sharp on account of the limits of the right-of-ways. These curves were super-elevated for the safety and convenience of the automobile traffic.

The following roads were officially designated as State Roads during the past biennium: The road from Ogden to Hooper via Wilson and Kaneshville was designated December 21, 1915. The road from Five Points to Plain City via Harrisville and Far West was also designated December 21,

WEBER COUNTY

1915. The road extending northwestwardly from Eden via Liberty to the Cache County line was designated August 17, 1916.

A total of twenty-one culverts were constructed in Weber County during the past biennium, all in 1916. Eleven were built with corrugated iron pipe and ten of reinforced concrete. No culverts were reported in 1915.

In 1916, a reinforced concrete bridge was constructed over the Davis and Weber Canal. The span is ten feet face to face and the slab is eighteen feet wide. The bridge was constructed during the progress of the concrete road work at this point. No bridges were constructed during 1915.

Considerable repair and maintenance of roads, bridges and culverts, also other maintenance and miscellaneous work, was accomplished in Weber County during the past biennium, as will be noted in the accompanying tables.

WEBER COUNTY

STATEMENT OF APPROPRIATIONS AND DISBURSEMENTS IN WEBER COUNTY 1915-1916.

RECEIPTS

State Appropriations:

Balance State Appropriation on Hand		
Dec. 1, 1914.....	\$ 828.20	
1915-1916 State Appropriations.....	9,464.27	
Motor Vehicle Fee Fund.....	118.92	\$10,411.39

County Appropriations and Tax Levies:

Balance County Appropriation on			
Hand Dec. 1, 1914.....	\$ 1,622.41		
1915-1916 County Appropriations....	9,464.27		
Balance Road Tax on Hand Dec. 1,			
1914	7,409.85		
1915 State Road Tax Collections Date			
of Levy to Final Settlement.....	41,211.78		
1916 State Road Tax Collections			
Remitted Nov. 22, 1916.....	6,526.00		
Additional Collections 1913 State			
Road Tax Jan. 1, 1914, to Dec. 31,			
1914	126.45	66,360.76	\$76,772.15

DISBURSEMENTS.

State Appropriation Fund	\$10,187.40	
County Appropriation Fund.....	11,074.07	
Special State Road Tax Levy.....	51,506.24	
Motor Vehicle Fee Fund.....	118.92	\$72,886.63
Gross Balance Dec. 1, 1916.....		\$ 3,885.52
Less Unpaid Labor and Purchases...		26,860.60
*Deficit December 1, 1916.....		\$22 9750.8

STATEMENT OF ROAD TAX LEVIES.

Year	Taxable Valuation	Mills	Loss in Fractions	Levy
1915	\$21,556,522.00	2	4.55	\$43,108.49
1916	45,484,740.00	1	5.45	45,479.29

*Deficit covered by 1916 State Road Tax Collections not reported prior to December 1, 1916.

WEBER COUNTY

WEBER COUNTY—ROAD CONSTRUCTION, 1915.

PRECINCT	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile
BURCH CREEK	1.3											
EDEN	4.7											
FAR WEST	2.5											
GARLAND	1.0											
HARRISVILLE	2.6											
HOOPER	3.1											
HUNTSVILLE	8.7					22	Tarvia	16	1	0.70	*	
KANESVILLE	4.5											
NORTH OGDEN	3.2											
OGDEN	10.0					30	Tarvia	16	¾	0.25	*	
PLAIN CITY	2.5											
PLEASANT VIEW	3.5					30	Tarvia	16		3.75	\$ 2,026.08	\$ 540.29
RANDALL	2.1					22	Tarvia	16	¾	2.05	600.00	292.63
RIVERDALE	6.1	30 36	0.30 0.49	\$ 944.14	\$ 1,195.11	30 36	Gravel Soil	24 30	9 9	0.09 0.45	400.50	741.67
UINTA	1.0											
WEST WARREN	7.3											
WEST WEBER	3.2	30	0.99	†			Crushed Stone Tarvia	15 16	8 ¾	0.50 0.25	3,784.54	504.61
WILSON	5.9	30	0.92	†		30	Crushed Stone	15	8	0.46	7,667.95	16,671.63
TOTAL	73.2		2.70	\$ 944.14	\$ 349.67					8.50	\$14,479.07	\$ 1,703.42

*Labor paid for by Weber County.

†Cost not segregated.

WEBER COUNTY—ROAD CONSTRUCTION, 1916.

WEBER COUNTY—ROAD CONSTRUCTION, 1916.													
ROAD	Miles of State Road Designated	ROAD GRADED			ROAD SURFACED								
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Depth in Inches	Length in Miles	Total Expenditures	Cost per Mile	
EDEN-CACHE	12.3	18	0.34	\$ 344.00	\$ 1,011.77								
DEVILS GATE	1.0												
FIVE POINTS-PLAIN CITY	7.6	30	0.74	368.99	498.63	30	Limestone Gravel	16	8	0.38			
						36	Oil and Gravel	16	1	0.67			
						36	Gravel	16	1	1.00	\$ 2,498.85	\$ 1,218.16	
OGDEN-BOX ELDER	6.7					36	Tarvia and Gravel	18	¾-1¼	3.75			
						36	Oil	24	½	3.00	7,473.92	1,107.25	
OGDEN CITY	10.0												
OGDEN-DAVIS	4.9	30	1.52			30	Concrete	18	6-8	1.52			
		36	1.14	85.75	32.24	36	Concrete Roadmite	16	¾-¾	1.14			
						50	Oil	16	½-¾	0.32	\$7,841.54	7,707.00	
OGDEN-HUNTSVILLE	15.5	30	0.30	*		22	Tarvia	16	¾-1	4.80			
OGDEN-WILSON	1.0					30	Oil	14	¾-1	3.90	6,402.68	725.94	
RIVERDALE-DAVIS	2.5												
WILSON-HOOVER	10.0	30	0.42			30	Granite	16	8	0.10			
		36	1.23	2,190.65	1,327.67	30	Clay	18	8	0.51	2,130.15	961.77	
						30	Clay	18	10	1.56			
WILSON-WARREN	14.0	30	1.00	178.50	178.50	30	Oil	14	1	1.15	4,208.41	1,953.68	
						30	Gravel	16	8	1.00			
TOTAL	85.5		6.69	\$ 3,167.89	\$ 473.52					26.73	\$61,050.55	\$ 2,283.97	

*Cost not segregated.

WEBER COUNTY

WEBER COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1916.													
ROAD	BRIDGES						CULVERTS						
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway in Feet	Part Done During 1916	Expenditures During 1916	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
EDEN-CACHE								Concrete	1	3'x5'	18	\$ 127.83	\$127.83
FIVE POINTS-PLAIN CITY								Cor. Iron	2	12"	24		
								Cor. Iron	1	15"	24	82.60	27.53
OGDEN-BOX ELDER								Cor. Iron	1	12"	36	37.40	37.40
OGDEN-DAVIS	Davis-Weber Canal	Concrete Slab	Concrete	10	18	All	\$ 48.18	Cor. Iron	1	10"	22		
	Orchard-Bamberger					Eng'g.	77.48	Cor. Iron	1	18"	32	73.80	36.90
OGDEN-HUNTSVILLE								Cor. Iron	1	10"	32		
								Concrete	1	3'x2'	32	57.45	28.72
WILSON-HOOPER								Cor. Iron	4	10"	15		
								Concrete	1	1'x2'	20		
								Concrete	1	2'x2'	20		
								Concrete	1	5'x2'	20		
								Concrete	1	6'x2'	20		
								Concrete	1	8 1/2'x2 1/2'	20		
								Concrete	1	3'x2'	20	679.13	67.91
WILSON-WARREN								Concrete	1	1 1/2'x1 1/2'	24		
								Concrete	1	2'x2'	24	30.36	15.18
TOTAL							\$ 125.66		21			\$ 1,088.57	\$ 51.85

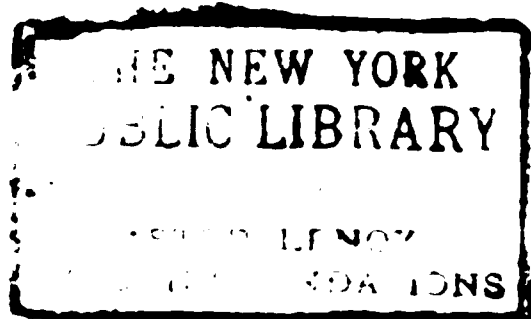
WEBER COUNTY



(Weber No. 52.) Section of Ogden-Davis Road Treated with Roadamite.

(Weber No. 53.) Section of Roadamite Road Ready for the Placing of Screenings on the Surface.

	MAINTENANCE				MISCELLANEOUS		
	Of Graded Roads	Of Surfaced Roads	Total Cost	Average Cost per Mile	Temporary Bridges, Material, Equipment, etc.	Cost	Total Cost of All Work
		\$ 898.22	\$ 898.22			\$ 3,415.22	\$ 15,166.12
	\$ 1,777.16	1,190.51	2,967.67			2,723.60	45,934.42
	8,348.77	1,622.20	9,970.97			12,182.42	57,794.57
	5,640.16		5,640.16			3,800.13	35,592.15
	455.83	1,615.46	2,071.29			383.13	26,966.64
	1,874.90		1,874.90			2,279.61	9,564.42
	1,783.58		1,783.58			1,570.91	14,831.53
31.26	4,072.03		4,072.03			883.46	16,193.23
	3,296.44		3,296.44			1,063.13	10,146.03
	9,054.00		9,054.00			1,667.63	17,297.74
	640.29	489.34	1,129.63			628.18	14,013.94
	752.89		752.89			884.26	3,191.50
	7,492.81		7,492.81			2,089.14	21,388.81
	4,241.05	14.15	4,255.20			1,034.01	12,680.76
	1,693.00		1,693.00			703.27	14,799.54
	5,113.71		5,113.71			633.26	7,675.90
	3,087.06	1,964.54	5,051.60			20,937.91	167,243.26
	3,434.65		3,434.65			664.30	9,312.35
	5,780.40	893.33	6,673.73			2,676.14	26,450.34
	5,696.43		5,696.43			479.27	25,521.40
	2,341.94	1,415.83	3,757.77			2,404.74	20,784.33
	1,267.64	36.39	1,304.03			398.57	10,344.87
	274.90		274.90			5,659.16	12,112.22
	9,797.84	225.98	10,023.82			1,902.12	39,159.07
	3,980.38		3,980.38			1,592.31	14,429.15
	3,113.14		3,113.14			369.91	8,247.32
	439.39		439.39			254.21	3,487.12
	3,974.64	4,420.46	8,395.10			10,091.68	67,018.30
	\$99,425.03	\$14,786.41	\$114,211.44			\$83,371.68	\$732,347.03



STATE OF UTAH
FIFTH BIENNIAL REPORT
STATE
ROAD COMMISSION
1917-1918



PRESS OF
THE P. W. GARDINER CO.
SALT LAKE
H. F. G.

LETTER OF TRANSMITTAL.

Salt Lake City, Utah, December 1, 1918.

To His Excellency,
SIMON BAMBERGER, Governor of Utah.

Sir: In accordance with Section 2, Chapter 81, Session Laws of Utah, 1915, I have the honor to submit herewith the Fifth Biennial Report of the State Road Commission, for the years 1917 and 1918.

Respectfully,

IRA R. BROWNING,
Secretary-Engineer.

COMMISSIONERS

SIMON BAMBERGER, Chairman
Governor of Utah
Salt Lake City, Utah

HARDEN BENNION, Vice-Chairman
Secretary of State
Salt Lake City, Utah

G. F. McGONAGLE
State Engineer.
Salt Lake City, Utah

DAN B. SHIELDS
Attorney General
Salt Lake City, Utah

JOSEPH RIRIE
State Auditor
Ogden, Utah

OFFICERS AND EMPLOYEES

ENGINEERING DEPARTMENT STATE ROAD COMMISSION

IRA R. BROWNING, State Road Engineer and Secretary
W. A. RICHMOND, Assistant Engineer

- *C. S. JARVIS, Office Engineer
- C. S. FISHER, Bridge Engineer
- *H. C. LEWIS, Bridge Engineer
- *H. A. RAGER, Bridge Engineer
- R. W. ARMSTRONG, District Engineer
- J. O. BURSON, District Engineer
- J. H. TUTTLE, District Engineer
- H. S. KERR, District Engineer
- R. E. DILLREE, Construction Superintendent
- C. V. GARDNER, Resident Engineer
- J. P. CURTAIN, Jr., Resident Engineer
- *LEVI MUIR, Resident Engineer
- C. S. PEIRCE, Draftsman
- JOS. BLICKENSDECKER, Draftsman
- C. G. WOOLEY, Draftsman
- R. W. GROO, Draftsman
- H. S. NICHOL, Draftsman
- F. A. STANDIFORD, Draftsman
- *M. O. SIMONS, Draftsman
- *W. G. COOK, Draftsman
- *N. A. IVIE, Field Engineer
- *ROBERT FLAGEL, Field Engineer
- W. W. STIFFLER, Field Engineer
- F. D. MILES, Field Engineer
- J. F. CULLEY, Field Engineer
- F. A. STRAIN, Field Engineer
- J. SMALENBERG, Field Engineer
- *CLARENCE GOODWIN, Transitman
- *C. E. HIGBEE, Transitman
- *R. D. BADHAM, Rodman
- *JACK POMEROY, Foreman

*Men now in U. S. army.

OFFICERS AND EMPLOYEES.

ACCOUNTING DEPARTMENT STATE ROAD COMMISSION

W. L. LAMPH, Chief Clerk
L. M. PARKER, Purchasing Clerk
H. M. HALEY, Bookkeeper
HELEN G. WHITE, Comptometer Operator
AGNES McNEIL, Assistant Secretary
AURA ROGERS, Stenographer
EVELYN TEMPEST, Stenographer
JOS. A. SMITH, Bills Payable Registrar
MINNA I. HOGGEN, File Clerk
A. W. B. BIRD, Bookkeeper
EMMA BENGE, Stenographer
*MARK A. HOWARD, Chief Clerk
*BLAND SORENSON, Purchasing Clerk
*HAROLD McNEIL, Voucher Clerk
*DEAN COLLETT, Purchasing Clerk
A. E. GUYMAN, Voucher Clerk

*Men now in U. S. army.

STATE ROAD AGENTS.

COUNTY	AGENT	ADDRESS
BEAVER.....	James E. Robinson.....	Beaver, Utah
BOX ELDER.....	K. C. Wright.....	Brigham City, Utah
BOX ELDER.....	T. P. Meister.....	Tremonton, Utah
CACHE.....	George E. Hancey.....	Logan, Utah
CARBON.....	T. P. Lamons.....	Price, Utah
DAVIS.....	Frank Williams.....	Kaysville, Utah
DAGGETT.....	Kenneth Sawyer.....	Linwood, Utah
DUCHESNE.....	A. M. Murdock.....	Duchesne, Utah
EMERY.....	Carl Wilberg.....	Castle Dale, Utah
GARFIELD.....	James A. Worthen.....	Panguitch, Utah
GRAND.....	R. C. Clark.....	Moab, Utah
IRON.....	D. Claude Urie.....	Cedar City, Utah
JUAB.....	Charles A. Hall.....	Nephi, Utah
MILLARD.....	Frank T. Slaughter.....	Kanosh, Utah
KANE.....	J. E. Bunting.....	Kanab, Utah
KANE.....	H. C. Esplin.....	Orderville, Utah
MORGAN.....	Conway Morris.....	Morgan, Utah
PIUTE.....	LeRoy Dalton.....	Circleville, Utah
RICH.....	James Stuart.....	Woodruff, Utah
SALT LAKE.....	George F. Taylor.....	R.F.D. 1 Sugar Station
SAN JUAN.....	D. P. Black.....	Monticello, Utah
SEVIER.....	Joseph A. Smith.....	Monroe, Utah
SUMMIT.....	L. P. McGarry.....	Park City, Utah
TOOELE.....	R. R. Judd.....	Grantsville, Utah
UINTAH.....	George L. Goodrich.....	Vernal, Utah
UTAH.....	R. W. Money.....	Spanish Fork, Utah
WASATCH.....	Henry T. Coleman.....	Midway, Utah
WAYNE.....	W. H. Morrell.....	Loa, Utah
WASHINGTON.....	John T. Cottam.....	St. George, Utah
WEBER.....	W. H. Taylor.....	Ogden, Utah

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FIFTH BIENNIAL REPORT STATE ROAD COMMISSION

1917 and 1918

GENERAL STATEMENT.

The personnel of the State Road Commission remained the same as during the Fourth Biennial Period, until the 8th day of May, 1917, when House Bill No. 167 passed by the Legislature of 1917, became effective. The new law created a State Road Commission consisting of the Governor of the State, Engineer, the Attorney General, the Secretary of State, and the State Auditor, said members of the Commission to serve without compensation.

At the first meeting of the new State Road Commission a resolution was passed appointing Ira R. Browning, State Road Engineer, and Secretary of the State Road Commission.

The new Commission deemed it a better plan not to divide the State up into districts with a Commissioner in charge of each District, believing that to make each Commissioner thoroughly familiar with all matters in connection with each County in the State the better plan. It was decided that the State Road Engineer should make various trips into the counties, ascertain their needs, and then confer with the Commission at their regular meetings.

The State Road Engineer, as during the former administration, continued to have direct charge of the engineering and supervision of all construction work, and of the engineering and clerical office work of the Commission. The State Road Engineer was furnished with two assistants, Mr. J. O. Burson, who held the position of Assistant State Road Engineer, and Mr. C. S. Jarvis, who held the position of Office Engineer and Assistant Secretary of the Commission, until November, 1918, when Mr. Jarvis was called into the service of the Government.

Recently a plan was outlined by the Commission to appoint District Engineers in the State, and J. O. Burson was appointed District Engineer in charge of Salt Lake, Summit, Davis, Tooele, Utah and Wasatch Counties, with headquarters at Salt Lake; R. W. Armstrong in charge of Weber, Morgan, Box Elder, Cache, Rich and Daggett Counties with head-

contemplate extensive improvements during the construction season of 1918. During the early part of 1918, quite a showing was made in the hard surfaced pavements as well as surfacing and maintenance of the various roads throughout the State, but during the latter part of the 1918 construction season the State Road work has been greatly hampered due to the fact that the United States Highways Council made it necessary to have all projects approved, and unless they believed the project absolutely essential in helping to win the war, they refused to furnish priority orders on shipments of necessary steel and cement. We were also held up to a large extent on account of the Capitol Issues Committees refusing to allow the sale of Utah State Road Bonds, they of course, working in conjunction with the United States Highways Council. However, now that peace has been restored and the restrictions imposed by the United States Highways Council and Capitol Issue Committee removed, the State Road Commission is planning a very large amount of hard surfaced paving, construction of bridges as well as forest road and post road construction throughout the entire coming season.

Anticipating the shortage of labor, the Commission purchased some of the latest kinds and types of power driven machinery, including steam shovels, caterpillar tractors and motor trucks, and with the return of the soldiers and plenty of labor guaranteed, great strides are expected in road construction in Utah this season.

RECOMMENDATIONS.

The following recommendations are made by the State Road Commission for the consideration of the Thirteenth Session of the State Legislature.

1. That Section 2856, Compiled Laws of Utah, 1917, be amended by increasing the annual appropriation to provide state road funds for Daggett County.

2. That a bond issue of \$3,000,000 be authorized to be expended by the State Road Commission in the construction of State roads in the several counties.

3. That Section 3973, Compiled Laws of Utah, 1917, be amended to increase the annual registration fee on motor trucks; same to be determined with reference to type, size, capacity of truck, kind of tires used, and that maximum limits be placed on loads carried on paved roads and all other types of roads.

4. In order to expedite the payment of payrolls and bills, it is recommended:

That Section 2857, Compiled Laws of Utah, 1917, be amended by providing a penalty for failure of the County Auditor or the City Recorder to promptly honor all requisitions made by the State Road Commission for State Road Funds levied and collected.

5. That a law be enacted authorizing County Commissioners to levy a road tax for county road purposes equal to two-thirds of the levy for State Road purposes.

REPORT OF THE CLERICAL DEPARTMENT OF THE STATE ROAD COMMISSION

1917-1918.

ORGANIZATION: The State Road Engineer and Secretary of the State Road Commission is Acting Executive and is assisted by one First Assistant Secretary, one Second Assistant Secretary, one Chief Clerk, seven assistant clerks and two stenographers.

DUTIES: The Clerical Department attends to all correspondence, checks all claims for money and properly prepares them for approval of the State Road Commission and presentation to the State Auditor for payment; keeps a record of all moneys due, received and expended by the State Road Commission; keeps a record of all construction and maintenance costs, showing where and for what the money was expended; purchases all material and equipment for the construction and maintenance of State Highways; prepares for the various Boards of County Commissioners an itemized monthly statement of expenditures on State roads in their respective counties; performs such other duties as would ordinarily come within the scope of any executive office.

Since the present Commission assumed office, an Equipment Fund has been created for the purchase of modern road-building machinery and the following equipment has been acquired; 3 Erie steam shovels; 1 Bucyrus steam shovel; 5 White 5-ton trucks; 1 White 2-ton truck; 1 Kelly-Springfield 6-ton truck; 2 Garford 5-ton trucks; 1 Garford 2-ton truck; 1 Garford 6-ton truck; 1 Ford-Ames truck; 1 GMC 2-ton truck; 1 Holt 60 H.P. Caterpillar tractor; 1 Best 75 H.P. tracklayer; 1 Rumley 60 H.P. tractor; 2 Uncle Jim levelers; 2 elevating graders, also various pieces of smaller equipment such as concrete mixers and accessories.

This machinery is let to the various counties at fixed, per diem rental rates, which rates are based upon the purchase price of the equipment and the rate of depreciation. The maintenance of this equipment is assumed entirely by the various counties to which it is let.

The present State Road Commission has also established a machine shop in the basement of the State Capitol, in which all automobiles belonging to the State of Utah are repaired.

ating a con-

Commission
in order that

ACCOUNTING SYSTEM: The accounting system in use is largely patterned after, though not identical with, that in use in the offices of the Harriman System of railways.

REPORT OF THE ENGINEERING DEPARTMENT OF THE STATE ROAD COMMISSION.

ORGANIZATION: The engineering department of the State Road Commission consists of the State Road Engineer, and Assistant Engineer, the Bridge Engineer, Office Engineer, four district engineers, three resident engineers, field engineers and draftsmen. There are employed an average of three regular field engineers and an average of five regular draftsmen. During the construction season the resident and field engineers are used on construction work, while during the non-construction season they are employed in the office; during the busiest construction period there are employed one or two temporary draftsmen to assist in handling the field work. In each county the State Road Commission is represented by a State Road Agent, who operates only in the district to which he has been assigned. The State Road Agents are also part of the general engineering organization, as they have charge of most of the road equipment and supervise a great deal of the road construction.

PURPOSES: The purpose of the engineering department is to make the surveys of all proposed State and post roads, bridge and culvert improvements, and plot the profiles of the same; also to make the calculations, formulate the design, and prepare suitable plans and specifications for their most economical erection, as well as supervise, engineer, and inspect their construction. Careful reports are made by the district and field engineers, also the State road agents to the engineering office, stating full particulars of all projects for which they have employed labor or used materials. The engineering office also undertakes the tabulation of these records of construction work for the general information of the public and for embodiment in the biennial report. It is the duty of the engineering office to file all maps, drawings, profiles, specifications, calculations, field notes, photographs, catalogues and literature that may be accumulated by the engineering office, or that may have reference to the purposes or accomplishments of the Commission. It is also the duty of the engineering department to conserve and care for the supplies, instruments and other equipment required and used by the department for the performance of the various operations.

ACCOMPLISHMENTS: The accomplishments of the engineering department are shown in the reports of the twenty-nine (29) counties and the summary of road work chart, covering the biennium of 1917 and 1918. The reports are segregated into roads and the work is classified into the following divisions: graded roads, surfaced roads, bridges, culverts, maintenance, and miscellaneous construction, and the total cost and unit costs are given for every part of the work. In addition to this the State has undertaken the construction of post roads or federal aid projects. Project No. 1, Castle Gate to Duchesne, is at this time in course of construction. This project comprises 45 miles of earth and gravel surfaced road, the estimated total cost of which is \$131,132.10.

Project No. 2, Ogden to Hooper, is the second road to be constructed under this new method of financing road construction in Utah; comprises 9.6 miles of macadam pavement at a total cost of \$61,340.44, or \$6,389.69 per mile.

Project No. 4, Price to Emery, is 63 miles in length and the estimated total cost is \$109,923.00.

Project No. 5. Thompsons to Moab, is 35 miles long and the total estimated cost is \$50,685.25.

Project No. 6, Moab to La Sal Junction, is 24 miles in length and the total estimated cost of this project is \$34,755.60.

The plans, profiles, etc., will be complete about the beginning of 1919, for submission to the Government for its approval on Projects Nos. 4, 5 and 6, and construction on the same should in all probability be commenced early in the spring.

Surveys on four other projects, namely, No. 7, LaSal to Monticello, 36 miles; No. 8, Monticello to Blanding, 25 miles; No. 9, Delta to Kanosh, 55 miles; and No. 17, Scipio to LeVan, 28 miles, have been completed and actual work should be started sometime during the construction season of 1919.

STANDARD DESIGNS: The standard designs for steel truss, bridges, concrete girder bridges, concrete slot bridges and wood truss bridges, which were drawn up during the third and fourth biennium, have been used to a great extent and to great advantage during the past biennial period. The greater number of bridges constructed have required special designs for abutments only, the standard plans being used

for the superstructure. In many cases the standard bridge and culvert designs have been furnished to the counties to be used on roads other than State roads, thus saving hundreds of dollars worth of designing and also a tremendous amount of valuable time, due to the fact that they are always ready for use. During the past biennial period this office has accumulated a great number of government standards which have been filed and made available for immediate use. Special designs for culverts are rarely used so that the book of standard culvert plans compiled at the end of the record biennium has proved a most valuable asset in the culvert construction work.

SPECIAL DESIGNS: Special designs are required on all bridges and culverts constructed at sites where the conditions are peculiar and not adaptable to the use of standard designs.

LINCOLN HIGHWAY.

One of the most interesting sections of road work, both from an engineering and economic standpoint under construction by the Utah State Road Commission, is that which is known as the "Seiberling Section" of the Lincoln Highway through Tooele County, a seventeen mile cutoff across the Great Salt Lake Desert from Black Point to Granite Mountain, and also what is known as "Fisher Pass," a distance of six miles between Clover and Orr's Ranch. The work on both sections of this road is well along towards completion, and when finished will reduce the mileage of the old route by about fifty miles.

Through the good offices of Mr. F. A. Seiberling, President of the Goodyear Tire & Rubber Company, that Company contributed \$75,000, and Mr. Seiberling, personally contributed \$25,000, towards the construction of the "Seiberling Section," and Mr. Carl G. Fisher, President of the Lincoln Highway Association, contributed \$25,000 personally for use on the "Fisher Pass" section. In recognition of this the State Road Commission has named the section and pass as above noted.

A section of the country traversed is on a part of the old Lake Bonneville bed, a region of salt silt practically level, so that for much of the year when the ground is wet, bog conditions make it quite impassable. Even under most favorable conditions this route has been a hazardous one for heavy traffic, for although the surface dries fairly well at times, there are soft spots underlying beds of white clay mire, that render travel dangerous.

The construction is carried on by the use of elevating graders drawn by tractors, the material being discharged directly into the fill. When the grade is sufficiently high it is rolled with tractors and worked to an even surface with blade machines and finally rolled with wide wheeled trucks to prepare the top courses of gravel.

At the present time ten miles of subgrade have been completed and much of this gravel-surfaced.

During the past biennium, there was approximately three miles of subgrade constructed on the Lincoln Highway through Silver Creek Canyon in Summit County, and work

will be resumed on this section to the mouth of the canyon just as soon as the weather conditions will permit.

A new highway was built through Parley's Canyon for a distance of approximately three miles to eliminate some dangerous curves and provide a better road along this portion of the Lincoln Highway.

As soon as the above stretches are completed the entire Highway throughout the State of Utah will be in splendid condition for travel.

TOOL YARD AND SHOP.

Formerly the State Road Commission stored its road making machinery and equipment at the State Fair Grounds, where there is no adequate place to store large pieces of machinery.

The Commission was allowed the use of the stock coliseum but was required to clear the premises for each stock show or fair. This entailed considerable loss in labor and small supplies.

To provide a permanent place for this equipment the State Road Commission purchased a five-acre tract, from the Jennings Investment Company, located between Beck Street and the Bamberger tracks just south of the Jordan Mills.

The site is an admirable one for this purpose, having an outlet to the east on a paved roadway and on the west to the railroad. A spur connection with the railroad and a loading platform make it possible to handle transportation without drayage.

The grounds are enclosed with a high fence and open sheds built to provide shelter for all the larger pieces of equipment. A reinforced concrete shop, 40' x 60', has been erected, provided with steam heat and a six ton traveling crane. In this shop will be installed all necessary equipment so that any repair work can be handled in a first-class manner, and an oil house and stock room will be provided to eliminate waste of material.

Near the front of the grounds is to be erected a five-room cottage for the use of a storekeeper, who will also act as night watchman, and as an additional protection suitable lights are to be installed about the grounds.

FEDERAL AID PROJECTS.

POST ROADS.

Under Section 3, of the Federal Aid Road Act, which provides for the construction of post roads under the supervision of the State Road Commission, the Bureau of Public Roads has set aside for expenditure in Utah for the five-year period beginning June 30th, 1916, the sum of \$854,252.25, apportioned as follows:

For the fiscal year ending June 30th, 1917	....\$ 56,950.15
For the fiscal year ending June 30th, 1918	---- 113,900.30
For the fiscal year ending June 30th, 1919	---- 170,850.45
For the fiscal year ending June 30th, 1920	----227,800.60
For the fiscal year ending June 30th, 1921	----284,750.75

In order to take advantage of the aid extended by the Federal Government, the State of Utah is required to duplicate the amounts available by the Act.

The State Road Commission under authority granted by the Legislature of 1917, has to date selected the following routes for improvement which have been approved by the Secretary of Agriculture:

Project No. 1	Castle Gate to Duchesne	-----45	miles	----\$131,132.10
" No. 2	Ogden to Hooper	--- 9.6	"	---- 61,340.44
" No. 4	Price to Emery	----63	"	---- 109,923.00
" No. 5	Thompsons to Moab	_35	"	---- 50,685.25
" No. 6	Moab to La Sal	----24	"	---- 34,755.60
" No. 7	La Sal to Monticello	-----36	"	---- 52,133.40
" No. 8	Monticello to Blanding	-----25	"	---- 36,203.75
" No. 9	Delta - Holden - Kanosh	-----55	"	---- 66,000.00
" No. 10	Duchesne to Vernal	_61	"	---- 73,200.00
" No. 11	Lund to Cedar City	_34	"	---- 40,800.00
" No. 12	Cedar City to St. George	-----56	"	---- 67,200.00
" No. 13	Beaver to Milford	---33	"	---- 39,600.00

"				54,000.00
"				
"				42,000.00
"				86,400.00
"				33,600.00
"				33,600.00
"				66,000.00
"	No. 20	Junction to Escalante -----	66	" ----- 79,200.00
"	No. 21	Paragoonah to Orton -----	29	" ----- 34,800.00
"	No. 22	Milford to Newhouse -----	25	" ----- 30,000.00
"	No. 23	Richfield to Hanks-ville -----	140	" ----- 168,000.00
"	No. 33	Morgan City, Littleton, Peterson, Stoddard to Morgan City 17		" ----- 20,400.00
"	No. 34	From Wyoming State Line via Antelope & Manila to Linwood 14		" ----- 21,000.00

FOREST ROADS.

Under Section 8, of the Federal Aid Road Act which provides for the construction under the supervision of the Forestry Department of Roads partly or wholly within the National Forests, the Secretary of Agriculture has made available for use within the State of Utah the sum of approximately \$400,000.00 at the rate of \$40,000.00 annually for ten years beginning 1917 and the State of Utah is required to contribute a like sum. The Bureau of Public Roads has submitted the following projects for the approval of the State Road Commission:

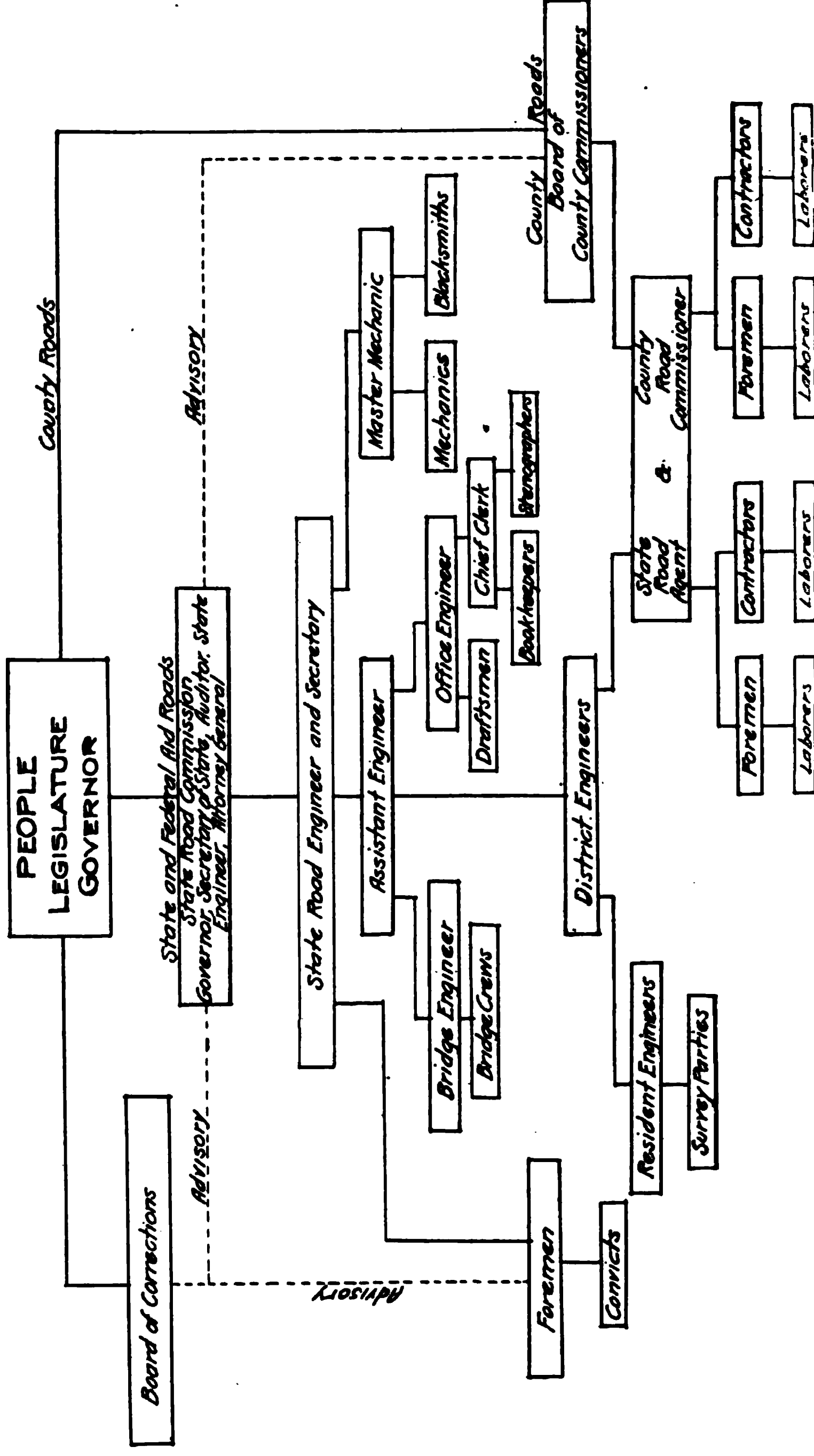
Order of Construction	List No.	NAME OF ROAD	Length Miles	Estimated Cost
1	1	Ephraim-Orangville Road	43	\$150,000.00
2	2	Logan-Garden City Road	40	87,000.00
3	3	Cedar-Long Valley Road	47	138,000.00
4	4	Kamas-Stockmore Road	29	30,000.00
5	6	Heber-Fruitland Road	52	120,000.00

6	8	Cove Fort-Sevier Road-----	21----	40,000.00
7	7	Hillsdale-Tropic Road-----	19----	35,000.00
8	15	Modena-St. George Road-----	40----	105,000.00
9	14	Salina-Emery Road-----	51----	126,450.00
10	12	Vernal-Burnt Fk. to Wyo.----	42----	65,000.00
11	10	Fairview-Clear Creek-----	20----	40,000.00
12	16	Monticello-Natural Bridges----	50----	100,000.00
13	17	Parowan-Panguitch Road-----	32----	50,000.00
14	18	Beaver-Junction Road-----	32----	60,000.00
15	20	Thurber-Escalante Road-----	65----	110,000.00
16	22	Mountain Meadows - Thorley Road -----	27----	50,000.00
17	31	Salina-Burrville Road-----	45----	80,000.00
18	34	Oakley-N. E. thru Summit Co. to Wyoming State Line--	60----	125,000.00
19	21	Hatch-Kolob Plateau-----	20----	30,000.00

STATE ROAD COMMISSION

ORGANIZATION OF ROAD FORCES

UTAH



STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
CONTINGENT
1917-1918

At the beginning of the biennium there was the net sum of \$112.41 remaining in the State Road Fund available for use in Contingent. During the biennium the State appropriated \$77,334.34, the Motor Vehicle Fee Fund amounted to \$33,338.38, making a total of \$110,785.13. Of this sum \$106,108.71 has been expended, leaving a net balance of \$4,676.42 on hand.

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
BEAVER COUNTY
1917-1918**

At the beginning of the biennium, there was the net sum of \$3640.51 remaining in the State Road Fund available for use in Beaver County. During the biennium the State appropriated \$8,075.86, the County appropriated \$7,075.86, and raised \$21,250.52 by special Road Tax Levy, making a total of \$40,042.75, which has been available for road construction. Of this sum \$35,869.05 has been expended, leaving a net balance of \$4,173.70 on hand.

BEAVER COUNTY

BEAVER COUNTY—BRIDGE AND CULVERT CONSTRUCTION, 1918.

ROAD	BRIDGES						CULVERTS					
	Name	Type	Kind of Abutments	Span in Feet	Width of Roadway	Expenditures During 1918	Type	Number	Size	Average Length in Feet	Expenditures	Average Cost per Culvert
BEAVER-IRON							Cement Galv. Iron	1 5'x6' 1 12"	30	30	\$ 161.25	
BEAVER-MILLARD							Cement	1 5'x6'	30	30		
							Cement	1 4'x6'	30	30		
							Cement	1 18"x36"	30	30		
							Cement Galv. Iron	1 2'x4' 1 24"	30 18	30 18	298.90	
MILFORD-FRISCO							Cement	1 4'x5'	30	30		
							Cement	1 4'x5'	40	40		
							Cement	1 5'x6'	30	30		
							Cement Galv. Iron	1 18"x4' 1 12"	30 30	30 30	483.21	
TOTAL								12			\$ 943.36	\$ 78.61

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
BOX ELDER COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$1,791.42 remaining in the State Road Fund available for use in Box Elder County. During the biennium, the State appropriated \$11,075.86; the County appropriated \$7,075.86, and raised by special Road Tax Levy, \$49,686.26, making a total of \$69,629.40, which has been available for road construction. Of this sum, \$66,284.97 has been expended, leaving a net balance of \$3,344.43 on hand.

BOX ELDER COUNTY

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BOX ELDER COUNTY

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UNCLASSIFIED

BOX ELDER COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Maintenance
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Sur-faced in Feet	Length in Miles	Total Expenditures	Cost per Mile	
BRIGHAM-COLLINSTON												\$ 203.39
BRIGHAM-TREMONTON												5,297.22
BRIGHAM-WEBER												1,087.62
BRIGHAM-WELLSVILLE												
GARLAND-CACHE												484.79
TREMONTON-IDAHO				\$ 2,538.64								3,365.00
TREMONTON-NEVADA				3,996.93								421.80
TREMONTON-DEWEYVILLE												12.25
TOTAL				\$ 6,535.57		40		16	0.5	\$ 1,142.14	\$2,284.28	\$10,872.07

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
CACHE COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$1,136.95 remaining in the State Road Fund available for use in Cache County. During the biennium the State appropriated \$49,675.87, the County appropriated \$8,675.86, and raised \$126,428.65 by special Road Tax Levy, making a total of \$185,917.53, which has been available for road construction. Of this sum, \$180,866.82 has been expended, leaving a net balance of \$5,050.71 on hand.

CACHE COUNTY

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CACHE COUNTY

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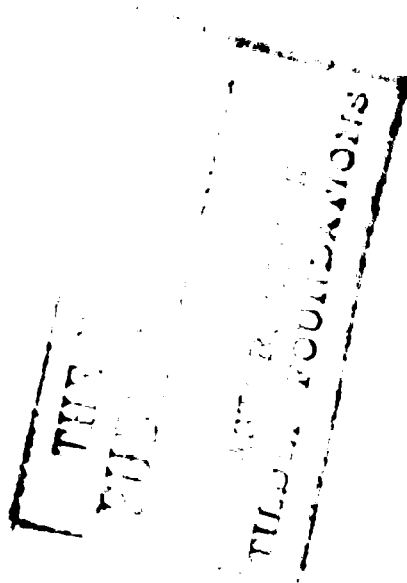
STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
CARBON COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$4,422.51 remaining in the State Road Fund available for use in Carbon County. During the biennium the State appropriated \$85,075.86, the County appropriated \$7,075.86, and raised \$65,576.30 by special Road Tax Levy, a total of \$162,150.53, which has been available for road construction. Of this sum, \$162,138.61 has been expended, leaving a net balance of \$11.92 on hand.

CARBON COUNTY

CARBON COUNTY





STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
DAGGETT COUNTY
1917-1918

At the beginning of the biennium there was the net sum of ———, remaining in the State Road Fund available for use in Daggett County. During the biennium the State appropriated \$8,475.86, the County appropriated ———, and raised \$690.14 by special Road Tax Levy, making a total of \$9,166.00 which has been available for road construction. Of this sum, \$1,585.21 has been expended, leaving a net balance of \$7,580.79 on hand.

DAGGETT COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
DAVIS COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$3,698.12 remaining in the State Road Fund available for use in Davis County. During the biennium the State appropriated \$42,175.87; the County appropriated \$7,075.86, and raised by special Road Tax Levy, \$31,710.22, making a total of \$84,660.07 which has been available for road construction. Of this sum, \$70,620.89 has been expended, leaving a net balance of \$14,039.18 on hand.

DAVIS COUNTY

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DAVIS COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
DUCHESNE COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$3,650.32 remaining in the State Road Fund available for use in Duchesne County. During the biennium the State appropriated \$31,575.86; the County appropriated \$7,075.86, and raised \$20,195.37 by special Road Tax Levy, making a total of \$62,497.41, which has been available for road construction. Of this sum, \$60,900.14 has been expended, leaving a net balance of \$1,597.27 on hand.

DUCHESNE COUNTY

DUCHESNE COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
EMERY COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$2,936.24 remaining in the State Road Fund available for use in Emery County. During the biennium the State appropriated \$7,575.86; the County appropriated \$7,075.86, and raised \$28,338.50 by special Road Tax Levy, making a total of \$45,926.46, which has been available for road construction. Of this sum \$45,721.86 has been expended, leaving a net balance of \$204.60 on hand.

EMERY

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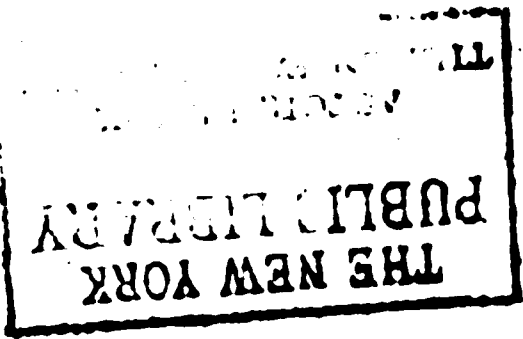
EMERY COUNTY

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EMERY COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						Maintenance
		Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Sur-faced in Feet	Length in Miles	Total Expenditures	Cost per Mile	
CASTLE DALE-CARBON		16	3.0	\$ 1,594.56	531.52	14	Blue Clay	14	2.0	\$ 1,182.77	591.38	
CASTLE DALE-GREEN RIVER		14	3.0	1,238.50	412.83							\$ 683.17
CASTLE DALE-SANPETE												2,035.44
CASTLE DALE-SEVIER		16	3.0	1,538.34	512.78	14	Blue Clay	14	2.0	4,098.98	2,049.49	
GREEN RIVER-CARBON		14	2.0									499.99
MOHRLAND		15	2.0	1,291.78	645.89	14	Blue Clay	12	1.25	2,035.17	1,628.13	
LAWRENCE-CARBON												1,404.55
MOHRLAND-BLACKHAWK	5.0	14	5.0	114.50	22.90							
TOTAL			18.0	\$ 5,777.68	320.98				5.25	\$ 7,316.92	\$1,393.69	\$ 4,623.15



**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
GARFIELD COUNTY
· 1917-1918**

At the beginning of the biennium there was the net sum of \$3,505.94 remaining in the State Road Fund available for use in Garfield County. During the biennium the State appropriated \$16,075.86; the County appropriated \$3,537.93, and raised \$25,502.47 by special Road Tax Levy, making a total of \$48,622.20, which has been available for road construction. Of this sum, \$44,483.73 has been expended, leaving a net balance of \$4,138.47 on hand.

GARFIELD COUNTY

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GARFIELD COUNTY

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
GRAND COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$1,210.67 remaining in the State Road Fund available for use in Grand County. During the biennium the State appropriated \$30,275.86, the County appropriated \$7,075.86, and raised \$12,135.00 by special Road Tax Levy, making a total of \$50,697.39, which has been available for road construction. Of this sum, \$47,836.93 has been expended, leaving a net balance of \$2,860.46 on hand.

GRAND COUNTY

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GRAND COUNTY

GRAND COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Length in Miles	Total Expenditures	Cost per Mile	Maintenance
MOAB-CASTLETON												\$ 993.21
MOAB-SAN JUAN	13.0						12 Red Shale	12	5.0	\$ 4,835.70	\$ 967.14	4,069.41
MOAB-VALLEY CITY	26.0	14	8.0	\$ 11,156.26	\$ 1,394.53							3,144.37
VALLEY CITY-COLORADO												2,648.17
VALLEY CITY-GREEN RIVER	25.0	12	4.0	1,603.96	400.99							
TOTAL	64.0		12.0	\$ 12,760.22	\$ 1,063.35						\$ 967.14	\$10,855.16

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
IRON COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$3,055.46 remaining in the State Road Fund available for use in Iron County. During the biennium the State appropriated \$12,275.86, the County appropriated \$7,075.86, and raised \$26,889.62 by special Road Tax Levy, making a total of \$49,296.80 which has been available for road construction. Of this sum \$47,807.04 has been expended, leaving a net balance of \$1,489.76 on hand.

IRON COUNTY

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IRON COUNTY

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TILDEN FOUNDATION

STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
JUAB COUNTY
1917-1918

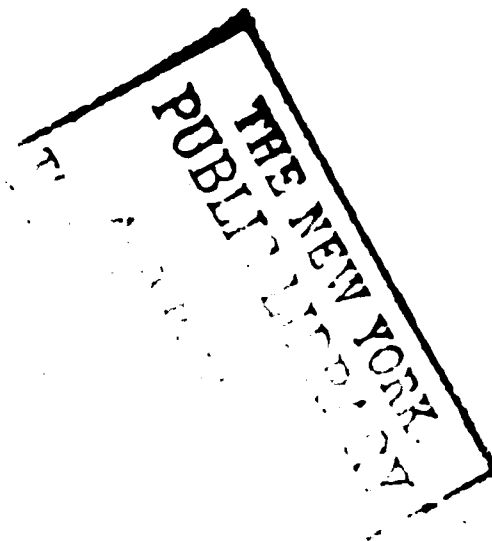
At the beginning of the biennium there was the net sum of \$2,508.36 remaining in the State Road Fund available for use in Juab County. During the biennium the State appropriated \$20,175.86, the County appropriated \$7,075.86, and raised \$8,586.24 by special Road Tax Levy, making a total of \$38,346.32, which has been available for road construction. Of this sum \$27,272.17 has been expended, leaving a net balance of \$11,074.15 on hand.

JUAB COUNTY

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JUAB COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
KANE COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$3,197.23 remaining in the State Road Fund available for use in Kane County. During the biennium the State appropriated \$11,475.86, the County appropriated \$1,768.96 and raised \$13,451.29 by special Road Tax Levy, making a total of \$29,893.34, which has been available for road construction. Of this sum \$20,730.64 has been expended, leaving a net balance of \$9,162.70 on hand.

KANE COUNTY

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KANE COUNTY

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THE
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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
MILLARD COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$6,488.56 remaining in the State Road Fund available for use in Millard County. During the biennium the State appropriated \$26,675.86, the County appropriated \$8,675.86 and raised \$24,348.39 by special Road Tax Levy, making a total of \$66,188.67, which has been available for road construction. Of this sum \$65,756.42 has been expended, leaving a net balance of \$432.25 on hand.

MILLARD COUNTY

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MILLARD COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
MORGAN COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$2,218.33 remaining in the State Road Fund available for use in Morgan County. During the biennium the State appropriated \$10,275.86, the County appropriated \$7,075.86 and raised \$11,684.93 by special Road Tax Levy, making a total of \$31,254.98, which has been available for road construction. Of this sum \$30,501.11 has been expended, leaving a net balance of \$753.87 on hand.

MORGAN COUNTY

MORGAN COUNTY

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MORGAN COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Sur-faced in Feet	Length in Miles	Total Expenditures	Cost per Mile	Maintenance
DEVIL'S SLIDE-CROYDEN												\$ 336.17
DEVIL'S SLIDE-HENEFER												2,990.52
MORGAN-DEVIL'S SLIDE						16	Gravel	16	1.25	\$ 3,906.25	\$3,168.20	50.45
MORGAN-PORTERSVILLE						16	Gravel	16	.25	1,193.15	4,772.60	1,333.19
MORGAN-WEBER		20	.5	\$ 2,177.07	\$ 4,354.14	16	Gravel	16	.1	250.17	2,501.70	
NORTH MORGAN-PETERSON		18	.5	256.30	512.60							53.11
TOTAL			1.0	\$ 2,433.37	\$ 2,433.37				1.6	\$ 5,349.57	\$3,343.47	\$ 4,763.44

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
PIUTE COUNTY
1917-1918

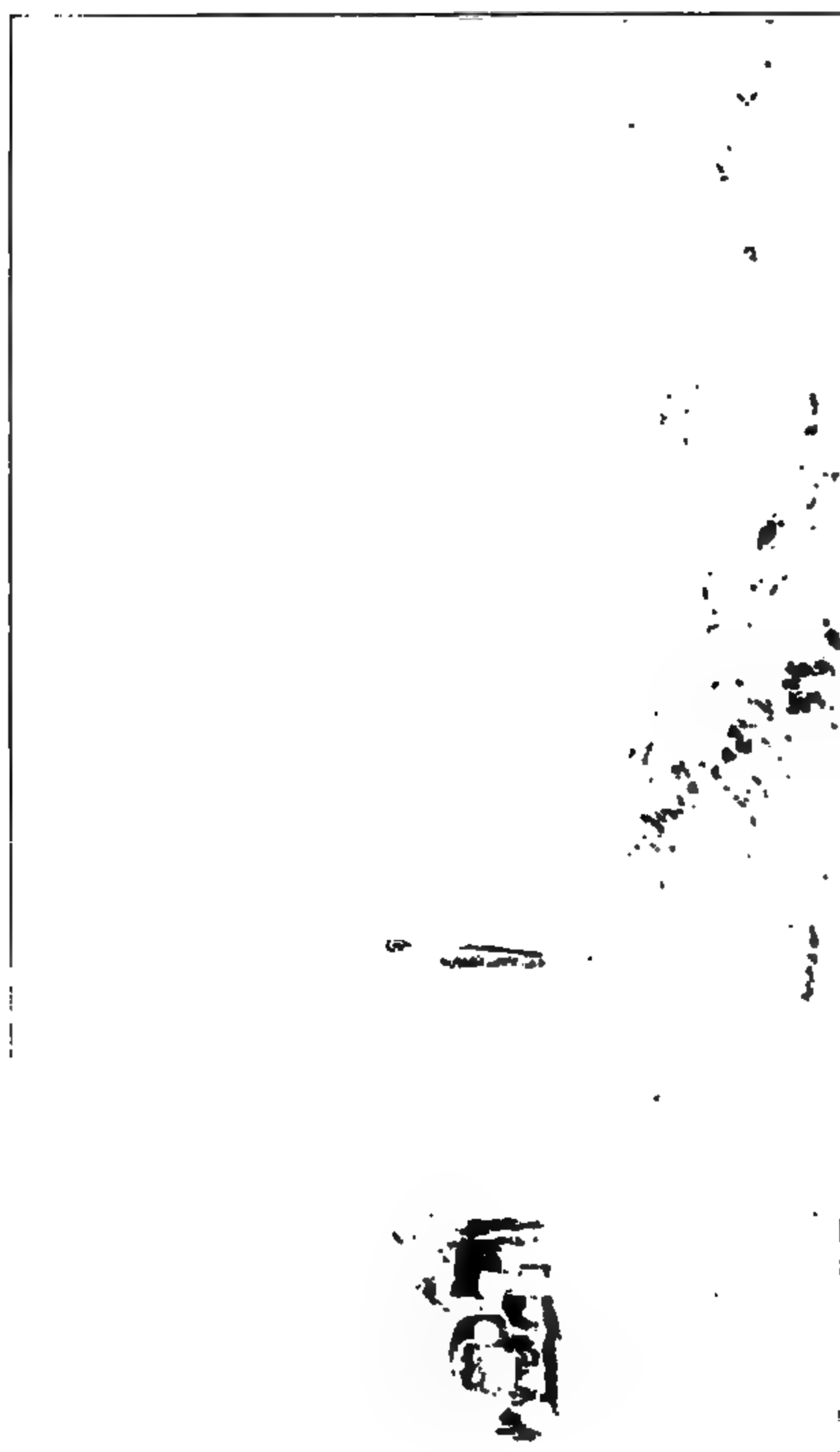
At the beginning of the biennium there was the net sum of \$4,817.07 remaining in the State Road Fund available for use in Piute County. During the biennium the State appropriated \$13,475.87, the County appropriated \$3,537.93 and raised \$8,873.78 by special Road Tax Levy, making a total of \$30,704.65, which has been available for road construction. Of this sum \$30,215.38 has been expended, leaving a net balance of \$489.27 on hand.

PIUTE COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
RICH COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$1,754.29 remaining in the State Road Fund available for use in Rich County. During the biennium the State appropriated \$8,475.86, the County appropriated \$3,537.93 and raised \$5,133.10 by special Road Tax Levy, making a total of \$18,901.18, which has been available for road construction. From this sum \$14,534.21 has been expended, leaving a net balance of \$4,366.97 on hand.

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RICH COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SALT LAKE COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$3,037.71 remaining in the State Road Fund available for use in Salt Lake County. During the biennium the State appropriated \$67,075.86, the County appropriated \$7,075.86 and raised \$265,297.32 by special Road Tax Levy, making a total of \$342,486.75, which has been available for road construction. Of this sum \$342,466.79 has been expended, leaving a net balance of \$19.96 on hand.

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SALT LAKE COUNTY

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SAN JUAN COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$1,988.64 remaining in the State Road Fund available for use in San Juan County. During the biennium the State appropriated \$9,475.86, the County appropriated \$3,537.93 and raised \$5,391.52 by special Road Tax Levy, making a total of \$20,393.95, which has been available for road construction. Of this sum \$20,383.50 has been expended, leaving a net balance of \$10.45 on hand.

SAN JUAN COUNTY

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SAN JUAN COUNTY

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SAN JUAN COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Sur-faced in Feet	Length in Miles	Total Expenditures	Cost per Mile	Maintenance
LASAL-COLORADO												\$ 195.00
LASAL-GRAND												2,644.63
MONTICELLO-BLUFF												2,358.54
MONTICELLO-COLORADO												158.54
MONTICELLO-LASAL	36.0	12	.75	\$ 2,287.21	\$ 3,049.61	12	Shale	10	.25	\$ 1,284.14	\$5,136.56	
TOTAL	36.0		.75	\$ 2,287.21	\$ 3,049.61				.25	\$ 1,284.14	\$5,136.56	\$ 5,356.71

STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SANPETE COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$399.99 remaining in the State Road Fund available for use in Sanpete County. During the biennium the State appropriated \$16,775.86, the County appropriated \$7,075.86 and raised \$37,905.10 by special Road Tax Levy, making a total of \$62,156.81, which has been available for road construction. Of this sum \$62,140.34 has been expended, leaving a net balance of \$16.47 on hand.

SANPETE COUNTY

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SANPETE COUNTY

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SANPETE COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Length in Miles	Total Expenditures	Cost per Mile	Maintenance
EPHRAIM-EMERY		12	.25	\$ 4,628.25	\$ 18,513.00							\$ 224.00
EPHRAIM-MT. PLEASANT												1,003.57
FAIRVIEW-EMERY	16.0	12	2.0	7,726.99	3,863.49							1,571.50
FAIRVIEW-UTAH		18	3.0	3,197.34	1,065.78							337.95
GUNNISON-JUAB												1,005.74
GUNNISON-SEVIER							Shale	18	1.5	\$ 2,060.68	\$1,373.78	105.48
MANTI-EPHRAIM												376.62
MANTI-GUNNISON							Shale	18	1.0	1,887.25	1,887.25	69.84
MAYFIELD BRANCH		18	2.0	962.66	481.33							53.80
MORONI-CHESTER												167.36
MORONI-JUAB							Clay	20	.4	1,661.10	4,152.75	75.85
MT. PLEASANT-FAIRVIEW		20	2.0	1,050.54	5,252.70							524.56
MT. PLEASANT-MORONI												534.79
EPHRAIM CITY												1,632.81
TOTAL			7.45	\$ 17,565.78	\$ 2,357.82				2.9	\$ 5,609.63	\$1,934.15	\$ 7,683.87

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TILDEN FOUNDATIONS

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SEVIER COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$3,083.03 remaining in the State Road Fund available for use in Sevier County. During the biennium the State appropriated \$12,875.86, the County appropriated \$7,075.86 and raised \$42,351.98 by special Road Tax Levy, making a total of \$65,386.73, which has been available for road construction. Of this sum \$65,372.96 has been expended, leaving a net balance of \$13.77 on hand.

SEVIER

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SEVIER COUNTY

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
SUMMIT COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$1,680.57 remaining in the State Road Fund available for use in Summit County. During the biennium the State appropriated \$12,775.86, the County appropriated \$7,075.86 and raised \$33,782.02 by special Road Tax Levy, making a total of \$55,314.31, which has been available for road construction. Of this sum \$55,018.62 has been expended, leaving a net balance of \$295.69 on hand.

SUMMIT COUNTY

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SUMMIT COUNTY

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
TOOELE COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$1,037.38 remaining in the State Road Fund available for use in Tooele County. During the biennium the State appropriated \$12,875.86, the County appropriated \$7,075.86 and raised \$35,223.43 by special Road Tax Levy, making a total of \$56,212.53, which has been available for road construction. Of this sum \$49,712.19 has been expended, leaving a net balance of \$6,500.34 on hand.

TOOELE COUNTY

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TOOELE COUNTY

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
UINTAH COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$2,705.59 remaining in the State Road Fund available for use in Uintah County. During the biennium the State appropriated \$12,075.86, the County appropriated \$7,075.86 and raised \$29,139.28 by special Road Tax Levy, making a total of \$50,996.59, which has been available for road construction. Of this sum \$47,758.53 has been expended, leaving a net balance of \$3,238.06 on hand.

UINTAH COUNTY

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UINTAH COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	ROAD GRADED				ROAD SURFACED							
	Miles of State Road Designated	Width in Feet	Length in Miles	Total Expenditures	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Surfaced in Feet	Length in Miles	Total Expenditures	Cost per Mile	Maintenance
JENSEN-COLORADO												\$ 625.75
VERNAL-DUCHESNE	32.0	16	30.0	\$ 9,106.85	\$ 303.56							3,739.84
VERNAL-JENSEN												780.73
VERNAL CITY						75	Clay	75	.1	\$ 220.84	\$2,208.40	
TOTAL	32.0		30.0	\$ 9,106.85	\$ 303.56				.1	\$ 220.84	\$2,208.40	\$ 5,146.32

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STATEMENT OF
REVENUES AND DISBURSEMENTS
IN
UTAH COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$7,131.77 remaining in the State Road Fund available for use in Utah County. During the biennium the State appropriated \$39,327.17, the County appropriated \$7,075.86 and raised \$98,894.70 by special Road Tax Levy, making a total of \$152,429.50, which has been available for road construction. Of this sum \$149,868.95 has been expended, leaving a net balance of \$2,560.55 on hand.

UTAH COUNTY

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**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
WASATCH COUNTY
1917-1918**

At the beginning of the biennium there was the net sum of \$2,229.59 remaining in the State Road Fund available for use in Wasatch County. During the biennium the State appropriated \$22,075.86; the County appropriated \$7,075.86, and raised \$18,582.03 by special Road Tax Levy making a total of \$49,963.34, which has been available for road construction. Of this sum \$49,687.93 has been expended, leaving a net balance of \$275.41 on hand.

WASATCH COUNTY

176



WASATCH COUNTY

178

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
WASHINGTON COUNTY.
1917-1918

At the beginning of the biennium there was the net sum of \$2,937.50 remaining in the State Road Fund available for use in Washington County. During the biennium the State appropriated \$17,475.86; the County appropriated \$7,075.86, and raised \$11,215.01 by special Road Tax Levy, making a total of \$38,704.23, which has been available for road construction. Of this sum \$38,703.22 has been expended, leaving a net balance of \$1.01 on hand.

WASHINGTON COUNTY 182

WASHINGTON COUNTY

184



STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
WAYNE COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$2,599.97 remaining in the State Road Fund available for use in Wayne County. During the biennium the State appropriated \$9,075.86; the County appropriated \$1,768.96 and raised \$2,342.40 by special Road Tax Levy, making a total of \$15,787.19, which has been available for road construction. Of this sum \$8,166.96 has been expended, leaving a net balance of \$7,620.23 on hand.

WAYNE COUNTY

188

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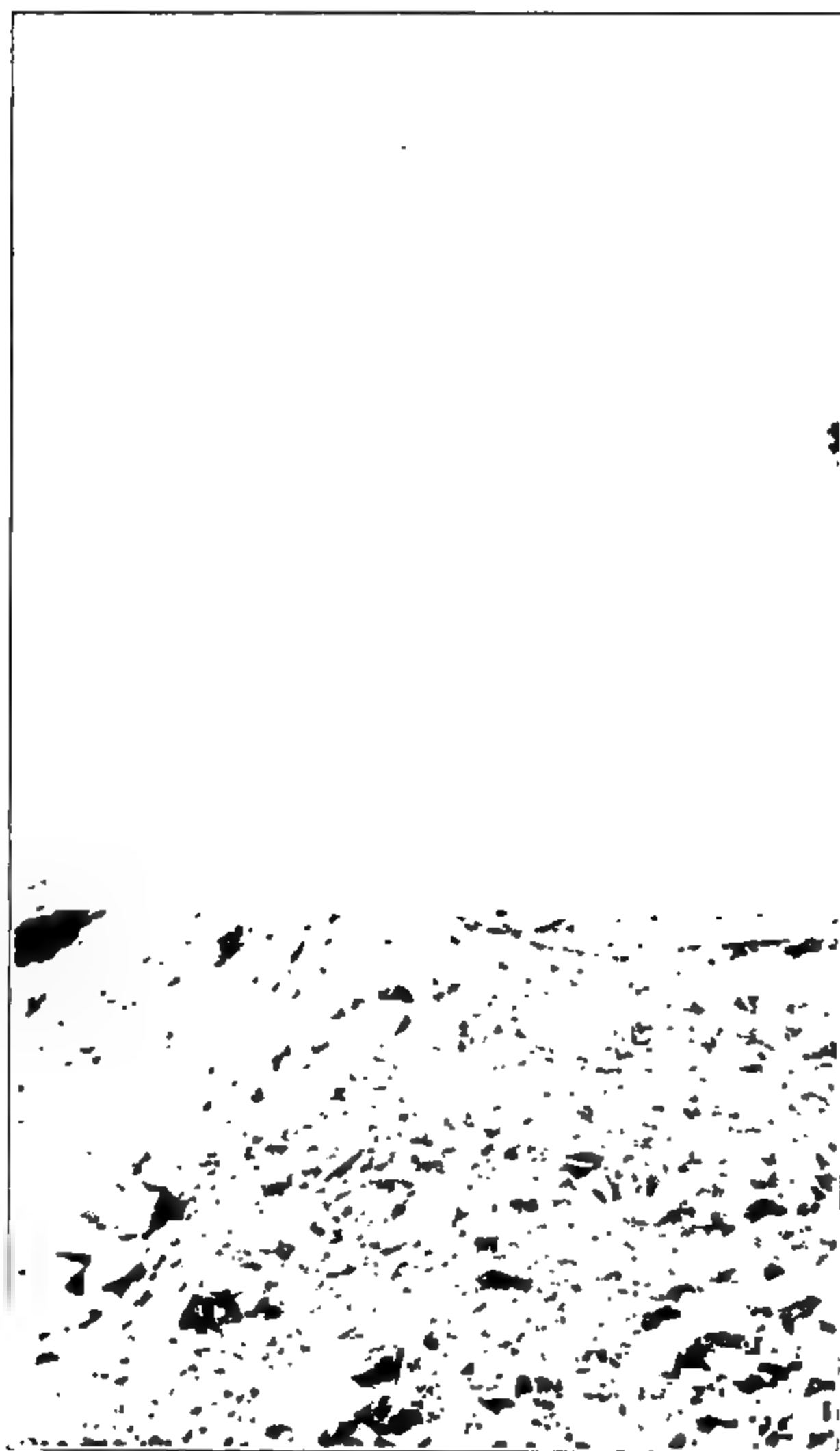
WAYNE COUNTY

190

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WAYNE COUNTY—ROAD CONSTRUCTION, 1918.

ROAD	Miles of State Road Designated	ROAD GRADED				ROAD SURFACED						
		Width in Feet	Length in Miles	Expenditures Total	Cost per Mile	Width in Feet	Kind of Surfacing Material	Width Sur- faced in Feet	Length in Miles	Total Expenditures	Cost per Mile	Maintenance
LOA-FREMONT												\$ 808.25
LOA-HANKSVILLE												2,459.46
LOA-PIUTE												937.40
TOTAL												\$ 4,205.11



STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
WEBER COUNTY
1917-1918

At the beginning of the biennium there was the net sum of \$5,447.96 remaining in the State Road Fund available for use in Weber County. During the biennium the State appropriated \$55,275.86; the County appropriated \$7,075.86, and raised \$156,922.02 by special Road Tax Levy, making a total of \$224,721.70, which has been available for road construction. Of this sum, \$215,712.76 has been expended, leaving a net balance of \$9,008.94 on hand.

WEBER COUNTY

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1

1

5

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STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
OF
MIDLAND TRAIL
1917-1918

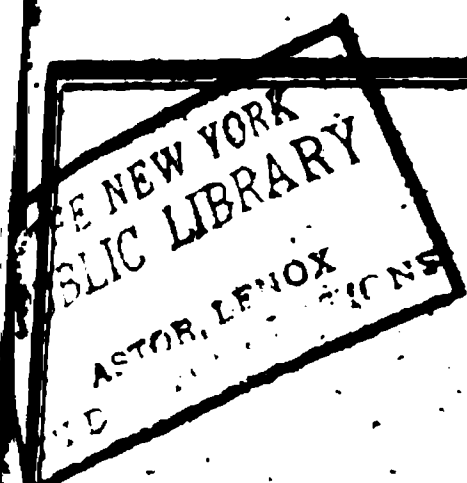
At the beginning of the biennium there was the net sum of \$1,351.89 remaining in the State Road Fund available for use of Midland Trail. The refunds and credits to this fund were \$537.15, making a total of \$1,889.04, which has been available for road construction. Of this sum \$348.27 has been expended, leaving a net balance of \$1,540.77 on hand to be distributed in the following counties: Box Elder, \$784.50; Carbon, \$396.20; Grand, \$360.07.

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
IN
EQUIPMENT
1917-1918**

At the beginning of the biennium there was the net sum of \$1081.55 remaining in the State Road Fund available for use for equipment. During the biennium the State appropriated \$114,760.91, making a total of \$115,842.46. Of this sum \$114,962.92 has been expended, leaving a net sum of \$879.54 on hand.

**STATEMENT OF
APPROPRIATIONS AND DISBURSEMENTS
OF SUSPENSE ACCOUNT
1917-1918**

At the beginning of the biennium there was the net sum of \$21,900.00 remaining in the State Road Fund available for distribution to various counties. During the biennium the State Bonds amounted to \$801,124.14, making a total of \$823,024.14, which has been available for road construction. Of this sum \$803,939.42 has been transferred to various counties, leaving a net balance of \$19,084.72 on hand.



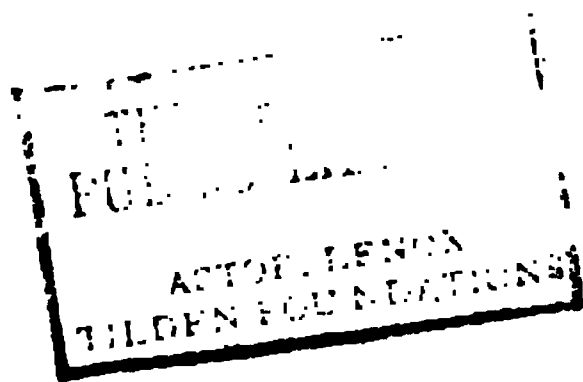
STATE OF UTAH

SIXTH
BIENNIAL REPORT
STATE ROAD
COMMISSION

1919 - 1920

INLAND PRINTING COMPANY
Keyville, Utah

(10741)



Provo River Bridge, Utah County.

STATE OF UTAH

SIXTH

BIENNIAL REPORT

STATE ROAD

COMMISSION

1919 - 1920

INLAND PRINTING COMPANY
Kaysville, Utah

LETTER OF TRANSMITTAL

Salt Lake City, Utah,
December 1, 1920.

To His Excellency, Simon Bamberger,
Governor of Utah.

Sir: In accordance with Section 2, Chapter 81, Session Laws of Utah, 1915, I have the honor to submit herewith the Sixth Biennial Report of the State Road Commission for the years 1919 and 1920.

Respectfully,

IRA R. BROWNING,
Secretary-Engineer.

COMMISSIONERS

SIMON BAMBERGER, Chairman,
Governor of Utah,
Salt Lake City, Utah.

HARDEN BENNION, Vice-Chairman,
Secretary of State,
Salt Lake City, Utah.

G. F. McGONAGLE,
State Engineer,
Salt Lake City, Utah.

DAN B. SHIELDS,
Attorney General,
Salt Lake City, Utah.

JOSEPH RIRIE,
State Auditor,
Ogden, Utah.

OFFICERS AND EMPLOYEES**Engineering Department
STATE ROAD COMMISSION**

IRA R. BROWNING, State Road Engineer and Secretary.
W. A. RICHMOND, Assistant Engineer.
R. WHITNEY GROO, Office Engineer.
C. S. FISHER, Chief Bridge Engineer.
J. O. BURSON, District Engineer.
LEVI MUIR, JR., Testing Engineer.
R. SIMPSON, District Engineer.
J. R. ELLIS, District Engineer.
L. W. BEASON, District Engineer.
W. H. CARRICK, Chief Draftsman.
R. W. DAVIS, Bridge Draftsman.
F. S. THOMPSON, Bridge Draftsman.
C. G. WOOLLEY, Resident Engineer.
WALKER PAUL, Resident Engineer.
H. V. RICHARDS, Draftsman.
J. H. KERSHAW, Draftsman.
K. W. TRESEDER, Draftsman.
A. C. WELTI, Draftsman.
J. A. BALDERSTON, Draftsman.
W. H. WEST, Draftsman.
C. W. CREPPS, Draftsman.
J. B. BURNS, Draftsman.
C. E. HIGBEE, Draftsman.
N. P. LARSEN, Draftsman.
M. HOUSECROFT, Draftsman.
W. L. CUMMINGS, Tracer.
G. R. BATTLE, Tracer.
T. M. EGAN, Draftsman.
J. E. GATHERUM, Stenographer.
F. D. MILES, Resident Engineer.
K. C. WRIGHT, Resident Engineer.
J. E. GARN, Resident Engineer.
GWYNNE LEWIS, Resident Engineer.
F. M. BENTON, Resident Engineer.
J. A. BLICKENSDETFER, Resident Engineer.
E. C. KNOWLTON, Resident Engineer.
E. S. BORGQUIST, Resident Engineer.
JAY RALEIGH, Resident Engineer.

OFFICERS AND EMPLOYEES**ACCOUNTING DEPARTMENT****STATE ROAD COMMISSION**

C. A. WHITING, Chief Clerk.
AGNES McNEIL, Assistant Secretary.
H. M. HALEY, Bookkeeper.
L. M. PARKER, Bookkeeper.
E. C. PENROSE, Supt. of Equipment.
H. C. HAINES, Cost Clerk.
AURA ROGERS, Stenographer.
L. H. GROESBECK, Purchasing Clerk.
MINA HOGGAN, Bills Payable Registrar.
ALICE B. REED, Cost Clerk.
L. R. PHELPS, Material and Supply Clerk.
DELIA HAFEN, Comptometer Operator.
CHARLES BROBERG, Clerk.

STATE ROAD AGENTS

County	Agent	Address
Beaver.....	James E. Robinson.....	Beaver, Utah
Box Elder.....	K. C. Wright.....	Brigham, Utah
Box Elder.....	T. P. Meister.....	Tremonton, Utah
Cache.....		
Carbon.....	T. P. Lamons.....	Price, Utah
Daggett.....	M. N. Larsen.....	Antelope, Utah
Davis.....	Frank Williams.....	Kaysville, Utah
Duchesne.....	A. M. Murdock.....	Duchesne, Utah
Emery.....	Warren Moffett	Castle Dale, Utah
Garfield.....	James A. Worthen.....	Panguitch, Utah
Grand.....	D. E. Baldwin.....	Moab, Utah
Iron.....	D. Claude Urie.....	Cedar City, Utah
Juab.....	Charles A. Hall.....	Nephi, Utah
Kane.....	H. C. Esplin.....	Kanab, Utah
Millard.....	Frank T. Slaughter.....	Kanosh, Utah
Morgan.....	Conway Morris.....	Morgan, Utah
Piute.....	LeRoy Dalton	Circleville, Utah
Rich.....	James A. Stuart.....	Woodruff, Utah
Sanpete.....	William W. Cheney.....	Fairview, Utah
Sevier.....	Joseph A. Smith.....	Monroe, Utah
Summit.....	L. P. McGarry.....	Park City, Utah
Summit.....	Albert T. Smith.....	Wanship, Utah
Tooele.....	R. R. Judd.....	Grantsville, Utah
Uintah.....	George L. Goodrich.....	Vernal, Utah
Utah.....	S. P. Stewart.....	Provo, Utah
Wasatch.....	Henry T. Coleman.....	Midway, Utah
Washington.....	John H. Cottam.....	St. George, Utah
Wayne.....	W. H. Morrell.....	Loa, Utah
Weber.....	W. H. Taylor.....	Ogden, Utah

OFFICIAL LIST OF STATE ROADS AND CONTRACTS

Beaver County	Davis County	Iron County
Beaver-Iron Beaver-Milford Beaver-Millard Milford-Newhouse Beaver-Piute	Farmington-Salt Lake Farmington-Weber Farmington City Riverdale-Morgan	Cedar-Kane Cedar-Lund Cedar-Washington Cedar-Beaver Modena-Washington Paragoonah-Garfield
Box Elder County	Duchesne County	Juab County
Tremonton-Idaho Brigham-Tremonton Brigham-Weber Brigham-Wellsville Tremonton-Snowville Snowville-Nevada Brigham City Tremonton City Brigham-Hot Springs	Duchesne-Carbon Duchesne-Roosevelt Myton-Carbon Duchesne-Wasatch Stockmore-Wasatch Utah-Carbon	Levan-Millard Nephi-Sanpete Nephi-Levan Nephi-Utah
Cache County	Emery County	Kane County
Logan-Smithfield Logan-Wellsville Logan-Garden City Smithfield-Idaho Wellsville-Brigham	Castle Dale-Carbon Castle Dale-Emery Huntington-Sanpete Emery-Sevier Orangeville-Sanpete Clear Creek-Fairview Green River-Carbon	Long Valley-Iron Kanab-Johnson-Gravel Springs Kanab-Garfield Kanab-Arizona
Carbon County	Garfield County	Millard County
Castle Gate-Duchesne Price-Castle Gate Wellington-Duchesne Price-Emery Price-Sunnyside Junction Clear Creek-Emery Emma-Park	Winder-Coyote Tropic-Hillsdale Panguitch-Kane Panguitch-Piute Orton-Iron Escalante-Winder	Kanosh-Beaver Holden-Scipio Holden-Kanosh Delta-Holden Scipio-Juab Cove Fort-Sevier
Daggett County	Grand County	Morgan County
Linwood-Manilla	Thompson-Moab Moab-San Juan Moab-Colorado Valley City-Green River	Morgan County Loop Morgan-Devil's Slide Peterson-Weber
		Piute County
		Junction-Circleville Junction-Coyote Junction-Marysvale Marysvale-Sevier Loa-Burrville Junction-Beaver

OFFICIAL LIST OF STATE ROADS AND CONTRACTS (Continued)

Rich County	Burrville-Fish Lake Sigurd-Piute Richfield City	Wasatch County
Randolph-Woodruff Woodruff-Weber Garden City-Cache Echo Canyon	Summit County	Heber-Fruitland Stewart's Ranch- Duchesne Heber-Summit Heber-Utah Soldier Summit
Salt Lake County	Coalville-Morgan Echo-Rich Park City-Salt Lake Park City-Kamas Wanship-Kamas Kimballs-Wanship Kamas-Wasatch Wanship-Coalville	Washington County
Salt Lake-Midvale Midvale-Utah West 33d South Magna-Tooele Salt Lake—Davis Parley's Canyon East 21st South	Tooele County	St. George-Arizona St. George-Iron St. George-Enterprise LaVerkin-Zion Canyon St. George-Anderson's Anderson-Arizona
San Juan County	Grantsville-Wendover Grantsville-Mills Tooele-Clover Clover-Orr's Ranch Orr's Ranch-Nevada State Line Tooele-Salt Lake	Wayne County
LaSal-Monticello Monticello-Blanding LaSal-Grand Blanding-Bluff LaSal-Colorado	Uintah County	Hanksville-Piute (via Loa)
Sanpete County	Duchesne-Vernal Vernal-Daggett Vernal-Colorado	Weber County
Pigeon Hollow-Fair- view Fairview-Emery Fairview-Utah Ephraim-Orangeville Pigeon Hollow-Juab Manti-Sevier Manti-Pigeon Hollow Mt. Pleasant City	Utah County	Ogden-Huntsville North Ogden-Hot Springs Ogden-Davis Riverdale-Morgan Washington Avenue Ogden-Hooper Huntsville-Rich Ogden-Five Points Five Points-Box Elder
Sevier County	Provo-Pleasant Grove American Fork-Salt Lake American Fork City Provo-Spanish Fork Spanish Fork-Payson Payson-Juab Springville-Sanpete Thistle-Duchesne Provo Canyon Provo City Spanish Fork-Juab	
Salina-Sanpete Richfield-Salina Richfield-Piute Sevier-Millard Salina-Emery		

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SIXTH BIENNIAL REPORT
STATE ROAD COMMISSION
1919 AND 1920

General Statement.

The statute providing for a State Road Commission and designating the personnel of same was approved March 23, 1909.

The first State Road Commission consisted of five members, as follows: Honorable William Spry, Governor of Utah, Chairman; R. R. Lyman, Vice-Chairman; Caleb Tanner, Secretary; David Mattson, Commissioner; J. W. Jensen, Commissioner.

On September 13, 1920, the Commission completed eleven years of existence and practically three years of Federal Aid.

Virtually all of the hard surfaced paving for the past four years has been placed on the State Highways as designated by the above Commission.

This, the Sixth Biennial Report, gives a complete statement of the operations of the Commission during the biennium, December 1, 1918, to November 30, 1920.

The Legislature of 1919 made certain changes in the State Aid Law; the principal effect of the changes made was to concentrate the State Aid and the Federal Aid with the County and Town funds on the State Trunk Highway System.

It may be reasonably expected that within a few years, under the above plan, Utah will have a satisfactory trunk system of State roads.

An effort has been made to condense this biennial report in the interest of the conservation of funds and paper. It is believed, however, that all essential information is given and that anyone interested in the work in any County may find reliable information as to the Counties' accomplishments and can also review the present highway situation in the State as a whole.

RECOMMENDATIONS

The following recommendations are submitted by the State Road Commission for the consideration of the members of the Fourteenth Session of the State Legislature:

1. That Legislative action for the protection of the State's highways against the excessive damage resulting from constantly increasing heavy motor truck traffic, be no longer delayed and that the trucks be required to bear a reasonable percentage of the cost of maintenance imposed by such traffic.

2. That Section 3,973 of the Motor Vehicle Law, fixing maximum load limits for motor trucks, be amended by regulating the same with reference to kind and widths of tires, and wheel or rear axle loads, providing penalties for violations, and authorizing the State Road Commission to employ special agents with police powers to enforce the provisions of the motor vehicle law.

3. That the State Road Commission be granted authority to prohibit heavy traffic on earth roads during the season of the year when the frost is leaving the ground.

4. That provision be made for raising additional State Road Funds in order to prevent the forfeiture of future Federal Aid in road construction.

5. Section 2,855, Chapter 57, Sessions Laws of Utah, 1919, directs the State Road Commission to make recommendations to succeeding Legislatures for extensions of the State Highway System. It is not deemed advisable at this time to recommend any extensions to the existing system for the reason that not more than 65 per cent of the present mileage has been improved, requiring an annual maintenance expenditure in excess of \$500,000.00, for which provision must be made for the ensuing biennium.

6. That suitable legislation be enacted requiring owners of livestock to repair all damages to roads occasioned by the driving of such stock thereon.

TESTING DEPARTMENT**STATE ROAD COMMISSION OF UTAH**

Early in 1919 the State Road Commission, realizing the necessity of keeping close check on the quality of all materials entering into highway construction, established the Testing Department. It has been the duty of this Department to make material surveys and to test and pass on all materials entering into construction. This work included tests on cement, sand, gravel, reinforcing steel, corrugated iron pipe for spelter, concrete pipe, etc.

In addition to making the above tests, all materials shipped to Federal Aid Projects from plants near Salt Lake City, have been inspected and sampled by men from this department. All sand and gravel shipped to Federal Aid Projects Nos. 4, 24 and 1 were inspected before leaving the plants.

The Testing Laboratory is located in the basement of the Capitol Building. It is very well equipped to run tests on cement, sand and gravel, and concrete. Some of the main pieces of apparatus are as follows: Tinius Olsen Hydraulic compression machine, with 400,000 pounds capacity; Deval Abrasion machine, Talbot Jones Rattler, Tinius Olsen Briquette tension machine, Tyler Rotap machine. Other pieces of equipment are sand and gravel screens, moulds for mortar and concrete, damp air and steam chambers and water tank for cement tests. The laboratory lacks equipment to make asphalt tests.

Since this laboratory has been in operation 250,000 barrels of cement have been tested. More than 1,200 tests have been run on sand, gravel and concrete, and over 1,000 samples of corrugated iron pipe have been tested for spelter. Other tests have been run on concrete pipe and reinforcing bars.

REPORT OF THE CLERICAL DEPARTMENT OF THE STATE ROAD COMMISSION

1919-1920

ORGANIZATION: The State Road Engineer and Secretary of the State Road Commission is Acting Executive and is assisted by one Assistant Engineer, two Assistant Secretaries, one Chief Clerk, nine Assistant Clerks and one Stenographer.

DUTIES: The Clerical Department attends to all correspondence, checks all claims and properly prepares them for approval of the State Road Commission and presentation to the State Auditor for payment; keeps a record of all engineering, construction and maintenance costs, showing where and for what purpose the money was expended; purchases all material and equipment for the construction and maintenance of State Highways; prepares for the various Boards of County Commissioners an itemized monthly statement of expenditures on State Roads in their respective counties, and performs such other duties as would ordinarily come within the scope of an executive office.

Since the present Commission assumed office, they have acquired equipment to the value of \$1,104,959.47, detail of which will be found on Page 51.

This equipment is let to the various counties at fixed per diem rental rates, based upon the value of the equipment and rate of depreciation.

The present State Road Commission has also built a machine and tool shop, detail of which will be found on Page 49.

ACCOUNTING SYSTEM: The accounting system in use is largely patterned after, though not identical with, that in use in the offices of the Harriman System of Railways. Full detail will be found on Pages 17 to 45.

INSTRUCTIONS REGARDING REPORTS AND ACCOUNTING

The forms herein described were adopted for use in the office of the State Road Commission in order to obtain uniformity in reporting field data and accounts.

The office requires duplicate copies of all bills and invoices, so that the original papers may be filed in the State Auditor's Office, and the carbon copies of such papers may be retained in this office, as matters of record.

The State Road Agent or Engineer should forward the original and duplicate (white and pink) copies of all forms to the head office, retaining the triplicate (yellow) copy for his own reference. All data pertaining to roads, bridges, or culverts should correspond to the official list of road names which will be found on Pages 8 and 9.

All employes of the State Road Commission are under the protection of the State Insurance Fund. Any accident or injury sustained by a workman in the course of his duty should be reported promptly to the State Insurance Fund, on forms furnished by the State Industrial Commission for that purpose.

INSTRUCTIONS REGARDING FORM 100-B**“PAY-ROLL”**

1. This form is to be used only for reporting actual labor performed by State Road Commission employees, and no personal expense, automobile mileage or expense for material and supplies should be shown thereon.

2. Eight hours is to be considered as one working day for State Road Commission employees. Before entering an employee's name on the time roll, always obtain his full first and middle initial. This, with the kind of occupation in which he will be engaged, must be entered on the pay-roll on the first day of each month or upon the first day that employee enters the service. All time worked must be entered at the close of each day's business.

3. Any foreman who keeps the pay-roll for his gang should send it to the District Engineer on the last day of the month; immediately upon receipt the Engineer will examine, approve if correct, and forward to the head office.

4. The actual number of hours which each employee works daily should be shown in the proper space in Column 4. For example, if an employee was shown on Line 4 of the pay-roll and he performed eight hours' work on the 11th day of the month, the figure 8 should be shown opposite Line 4, directly below the figure 11.

5. In case it is absolutely necessary for you to show an employee's name on the pay-roll more than once, you should number each sheet in your whole roll (each line is already numbered), and then in Column 8, opposite the employee's name, explain as follows: We will suppose John Doe was shown once on Sheet 3, Line 16, and once on Sheet 6, Line 4; in order to prepare your roll correctly you should turn to Sheet 3, and in Column 8, on Line 1, write "See S 6 L 4" (meaning see Sheet 6, Line 4), then turn to Sheet 6, Line 4, and place in Column 8, "See S 3, L 16." By doing this it will give notice to this office that duplication of an employee's name is cross-referenced.

6. The report should be sent to the State Road Commission Office immediately after the last day of the month, and it should reach this office not later than the 5th of the following month. Delays in submitting pay-rolls occasion serious difficulty and inconvenience to all employees concerned.

7. Timekeeping methods are the first and most important consideration and should be very carefully studied so that errors will not be committed.

The listing of employees on the pay-roll for each party or gang should show the supervising employee on the first line and his immediate assistants in their respective positions of importance following.

Any changes in rates of pay must not be made unless instructed by the State Road Engineer and confirmed from the Salt Lake office in writing.

Any adjustments which you desire to make in connection with underpayment of employees must be fully explained in writing to this office and a separate pay-roll made to cover.

In the preparation of the pay-roll the first name should be given in full, followed by the initials of any remaining given names, then the surname.

No pay-roll should be submitted to either the engineer or the head office unless accompanied by Form 103, "Distribution of Labor."

UNITED STATES
From the 1st to 31st
Voucher No. _____
Sheet No. _____
During the Month of _____ 1911.
Credited under the Direction of _____

PAY ROLL

STATE ROAD COMMISSION OF UTAH TO SUNDRY PERSONS DR.

Paid in service of the State Road Commission and that the same had been duly collected.		Checked by	Examined by
Signature			
Title			
I hereby certify that the persons named on this pay roll have been employed in the service of the State Road Commission of Utah during the time and in the manner specified and that the bills and amounts returned hereunder are correct and claims for the same are due.		RECEIVED By John C. Smith, Secy.	1911.
State Road Engineer	Secretary	RECEIVED By John C. Smith, Secy.	1911.
Assistant Secretary	Assistant Secretary	RECEIVED By John C. Smith, Secy.	1911.

INSTRUCTIONS REGARDING FORM 103**“DISTRIBUTION OF LABOR”**

1. This report is used to determine the actual cost of labor performed for all jobs, on each State road, in each county, during one month. A separate report must be kept for each road and the correct road name to correspond with the official list of road names furnished by the head office, is to be shown in the proper space, in the center of the form, at the top. It is not a time roll and must not be used to determine wages due.

2. This report must always accompany Form 100-B, “Pay-Roll,” when sending to this office at the close of each month’s work.

3. The State Road Commission is able, through this report, to compare costs of work in different sections of the State; also to correctly distribute the expense incurred by employees.

4. A State Road agent or engineer must require his foremen who keep these reports for the gangs under their supervision to send it in promptly to him on the last day of the month.

This report must be carefully prepared, for if it is not correctly filled in each day, it will not balance with Form 100-B, “Pay Roll,” the total amount of corresponding time roll.

6. The correct distribution of all employee’s time must be entered on this report each day after the actual work has been performed.

7. Each job should be listed separately in Columns 1 and 2 and the expense of labor performed on that job must always be separated to show the total number of hours worked by each group of employees who receive the same rate of pay.

8. Only one Distribution of Labor Report should be sent to this office from one agent covering labor performed on one road during one month. Therefore, if work was done by State Road Commission employees on all State

roads in one county and that county had only one State road agent, ten foremen (supervisors or deputies) and twelve designated State roads, this office should receive one Form 100-B, "Pay Roll," and 12 Forms 103, "Distribution of Labor"; if, during one month, four different foremen in charge of different gangs, work on the same State road, this office must only receive one report for that road, for the agent is required to consolidate the information shown on the Distribution of Labor Reports of all his foremen.

9. The information which is shown in Columns 1 and 2 may take up only two and three lines, but you have among your employees four different rates of pay; therefore you would need four lines to report that particular job. The total time worked by all employees on one job, who get the same rate of pay, must be shown on one line. Therefore, if the employees on one job are men of different occupations, and groups of them draw different rates of pay, one line should be used for each rate.

10. In Column 1 you are to state the actual location of the work as carefully as possible. Do not show locations, such as "Near Bill Jones' Ranch" or "Two miles from the mouth of Cowboy Hollow," but state definitely the road to correspond to official list of road names.

11. In Column 2 should be shown a clear, brief description of the general work which you were doing, and wherever possible state the "correct" title of work, list of which is shown below:

- Warehouse or storage yard.
- Graded roads.
- Concrete roads.
- Concrete culverts.
- Stone culverts.
- Corrugated iron culverts.
- Temporary bridges.
- Removal of wreckage of bridges.
- Road equipment, machines and tools.

12. In Column 3 you are to show the total number of hours worked by employees who performed labor on the job which is shown in Column 2. This entry must show separately the total number of hours worked by each group of men who received one rate of pay. For example, if 14 men were employed grading on earth road, 7 might be employed

as "man and team" at \$5.00 per day; 2 as "teamster only" at \$2.50 per day; 2 as "team only" at \$2.50 per day; 2 as "laborers" at \$2.50 per day, and 1 as "foreman" at \$3.00 per day. Three different rates of pay were paid among that group of men, and in preparing distribution of labor performed on the job (which should be shown in Column 2), three separate lines should be used. The total number of hours worked by the employees who received \$2.50 per day should be shown (in the proper place under the date on which they worked) on one line, and in Column 5 on the same line should be shown the figures "\$2.50." The next line should show the total number of hours worked by the foreman who received \$3.00 per day, and in Column 5 the figures "\$3.00" should be shown. The total number of hours worked by men and teams should be shown in manner similar to above on the next line and the figures "\$5.00" shown in Column 5 on the same line.

13. The small figures shown in Column 3, which number consecutively from 1 to 31, inclusive, represent dates of the month.

14. To assist in correct preparation of this report each day, an agent might go through a procedure similar to the following:

1. Think of the men who worked on the particular job on the road for which you are preparing report to cover; also the rate of pay which each man received.

2. Enter in Column 5, opposite the item on which you are working, the different rates of pay that were paid among the men on that work.

3. Place on a piece of paper the different rates of pay for those men in a form similar to this:

\$2.50	\$3.00	\$3.50	\$5.00
--------	--------	--------	--------

4. Write the actual number of hours each employee worked under the rate of pay which he drew.

5. Add the hours shown under each rate and place total in proper space under Column 3 opposite the same rate shown in Column 5.

BRIDGE DEPARTMENT

WEEKLY PAY ROLL DISTRIBUTION

This form is self-explanatory. The requisite data should be furnished and the form forwarded to the head office in accordance with instructions thereon.

STATE ROAD COMMISSION BRIDGE DEPARTMENT WEEKLY PAY ROLL DISTRIBUTION

Bridge		Location		Road		County	
Name		Number		Kind		Superstructure	
Stream		Kind		Foundation		Superstructure	
State Number of Days Worked		Pump		or Pile Driver in Use		Days	
Steel Piling		Lbs.		Scale Cement Used		Week Ending	
1918		1919		1920		1921	
Account Number	ITEM	QUANTITY	UNIT	AMOUNT	DATE	INITIALS	REMARKS
1	Temp. Bridge, Channel Change, etc.						
2	Excavation						
3	Hauling Cement, Steel, Lumber, etc.						
4	Hauling Sand, Gravel, Rock						
5	Shoring and Mason Work						
6	Stripping Sand, Gravel, Quarrying Rock						
7	Lumber, Shoring and Removing Forms						
8	Cement, Sand and Gravel, Pouring Concrete						
9	Beams, Steel-Piling and Erecting						
10	Piles—Driving Piles						
11	Hardware, Timber and Framing, Erecting Wood Truss						
12	Paint, Painting, etc.						
13	Setting Up or Moving Camp						
14	Backfill and Approaches						
15	Miscellaneous						
Total							

_____, S. Complete

_____,
Foreman of
Engineer

Make out report in triplicate, sending original to Chief Bridge Engineer, duplicate to District or Resident Engineer, keeping triplicate for your own file. Be accurate, as the total of your weekly reports must agree with the monthly report. This distribution to be filed promptly at end of each week and fractional part of week at end of the month. Instead of inserting the hours in the columns, state the amount. This should be done each day, so that at the end of the week, all that will have to be done is total. Under several distributions as indicated above, charge all expense incurred against each of the items properly. In O. K'ing bills for material, note on each bill the account number to which item should be charged. For example Under No. 3 should be charged to cost of pouring cement, the original cost of sand and gravel and cost of pouring concrete. The hauling of cement should be charged to Item 3, and hauling of sand to Item 4. By "Cost of Sand" means cost in the pit, or l. a. b. car at station.

Form No. 100

____ COUNTY

DATE

State Road Commission of Texas
DISTRIBUTION OF LABOR

DATE

DATE

FOR MONTH

22

22

22

(CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT)

TO BE SENT TO STATE ROAD COMMISSION

**INSTRUCTIONS TO STATE ROAD AGENTS REGARD-
ING PREPARATION OF FORM 105, "AGENTS
ORDER," ALSO FORM 105-A, "ADVISE
REGARDING AGENT'S ORDER"**

1. Form 105 is printed in triplicate (three copies) and bound in book form. Two sheets of carbon paper should be used when filling it out.

2. Care should be taken to show plainly the name of the town where you are located when order is made out, also actual date, correct name of firm, company or individual from whom purchase is made and their correct post-office address.

3. Form 105 is to be used by you for purchasing locally only small miscellaneous items which are needed immediately; also blacksmith work or those items which can be obtained as cheaply as this office can purchase same.

4. When parts of equipment or materials are ordered which are listed in catalogs by number, those numbers and the catalog number should always be shown, also quantity and price.

5. After writing out an order on Form 105, one sheet of carbon paper should be properly placed between the pink and yellow sheets of Form 105-A, which is bound in the book immediately following each set of Form 105, and that blank filled out in accordance with the instructions, printed in red, in the lower left-hand corner of the pink and yellow copies of Form 105 and 105-A.

6. The yellow copy of both forms is bound in the book and should be kept there for the agent's reference.

7. After Forms 105 and 105-A are properly filled out and signed, the white sheet of Form 105 should be given to the party from whom the material is purchased with the request that he deliver or send you an itemized bill in duplicate (two copies) for your approval.

8. Kindly instruct the party, who will render the bill, to make a separate bill for the items shown on each order.

9. On both the original and duplicate of each itemized bill should be shown plainly the order number which is printed in red on the Form 105.

10. When itemized bill in duplicate is received by you, it should be checked with your yellow copy of Form 105, and if you have received the material and find the prices shown to be correct, the duplicate (pink copy) of Form 105 and the original (pink copy) of Form 105-A, should both be pinned to the bill and an impression of the following rubber stamp:

Date.....

This bill is a correct and proper charge
against the State Road Commission of
Utah and is hereby approved for payment.

C. T. KELLER

State Road Agent.

should be placed on the face of the original itemized bill and signed by you, after which both copies of the itemized bill and pink sheets of Forms 105 and 105-A should be sent to this office to be placed in line for payment.

11. On original invoices covering expense for bridges and culverts, the following information must be shown:

Name of bridge, also approximate location of
same and name of stream or wash where located.

Approximate location of each culvert and
name, if named locally or by this office.

12. Base all roads to correspond with official list of roads.

13. Any information which you may be able to write on the back of the itemized bill or invoice will assist in completing the records of this office. For example, whether all materials will be used in one location, or in case of emergency, what made it necessary for purchase to be made; and if there may be any left over after work is complete, where it will be stored, etc., etc.

REPORT OF STATE ROAD COMMISSION

STATE ROAD COMMISSION OF UTAH
ADVISE REGARDING AGENTS ORDER No. 5798

_____, UTAH, _____, 191____

SECRETARY, STATE ROAD COMMISSION.

DEAR SIR:

RECEIVED

SHOWN ON ORDER NUMBER 5798 ARE FOR USE ON STATE ROAD WORK AS FOLLOWS:

REPORT OF STATE ROAD COMMISSION

29

NO PERSON SHOULD DELIVER GOODS TO ANY ONE ON THIS ORDER WITHOUT FIRST DETERMINING THAT HE HAS AUTHORITY TO BUY GOODS FOR THE STATE ROAD COMMISSION.

STATE ROAD COMMISSION OF UTAH

Form No. 108

AGENTS ORDER

No. 5798

_____, UTAH, _____, 191____

NAME _____

Post Office Address _____

PLEASE ENTER ORDER BASED ON PRICES FURNISHED, FOR ITEMS HERE LISTED AND DESCRIBED.

LINE NO.	QUANTITY	NAME OF ARTICLES	SIZE	PRICE	AMOUNT
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

NOTE:
ITEMIZED BILL COVERING THE ABOVE MUST BE SENT TO THE AGENT ORDERING, FOR APPROVAL.
DO NOT SEND BILL DIRECT TO THE STATE ROAD COMMISSION.

State Road Agent.

ORIGINAL

INSTRUCTIONS REGARDING FORM 108**"EMPLOYEE'S RECEIPT"**

1. Receipts must be obtained for money paid by any supervising employee for expense incurred in the interest of the State road work.

2. This receipt is to be made in triplicate, and original and duplicate should be sent in to support Form 109, "Itemized Statement of Personal Expenses."

3. Each receipt should show plainly where it was filled out, the amount it is for, the nature of expense which it covers and to which road and county it is chargeable.

4. The triplicate (yellow copy) is to be kept for the agent's future reference.

5. All expense amounting to \$1.00 or more must be supported by a receipt in order that the employee may receive reimbursement from the State Road Commission.

6. No receipt should be taken for general expenses amounting to less than \$1.00, with the exception of telephone service, telegrams, stage fare, automobile hire and railroad fare, in which cases it is optional with the employee.

7. Carbon paper should be used when making a receipt on this form in order that three copies can be made at one writing.

8. This form need not be used if another receipt is offered by the party to whom the money is paid, providing that same can be obtained in duplicate.

9. Duplicate receipts are necessary for the reason that originals are filed in the State Auditor's Office and duplicates in the Office of the State Road Commission.

10. This form is not to be used for obtaining signature of employee who receives check in payment of services performed or for any other purpose except where money is actually paid from the employee's personal funds for value received.

INSTRUCTIONS REGARDING FORM 129**“AGENT’S MATERIAL AND EQUIPMENT REPORT”**

1. An account with each supervising employee is kept in this office, which is charged with all material and equipment in his possession belonging to the State Road Commission, and in order that same may be credited when articles are used up, worn out or missing, it is necessary that a Form 129 be rendered and sent to the Salt Lake office.

2. This report must show the name of the town and date when report was made; the road upon which articles were used; the quantity and description of each article, and on the reverse side a description of the job on which it was used; the location of same. If used on a bridge, give name, span, and location.

3. This form is self-explanatory and further instructions regarding use will be found in the inside of the front cover, reproduced on Page 32.

4. The report should be made in duplicate by using carbon paper, and the original should be sent to the Salt Lake office, and duplicate retained in the book for agent’s future reference.

5. Special care should be taken showing explicitly the length, weight, kind, size, brand, quality or other description of each article. This is necessary in order that your account may be properly credited and that you may avoid disputes which would otherwise arise.

6. Each book is numbered consecutively and therefore if a form is spoiled it should be marked “void” or “canceled” and sent to this office.

7. Authorized signature and title of the employee in charge of the material should be shown in space provided on each report before sending to this office for credit.

REPORT OF STATE ROAD COMMISSION

ORIGINAL
FOR SALT LAKE OFFICE

STATE ROAD COMMISSION OF UTAH

FORM 10

AGENTS MATERIAL AND EQUIPMENT REPORT

11498

_____, UTAH _____ 191____ No _____

I CERTIFY THAT THE FOLLOWING ARTICLES HAVE BEEN USED OR WORN OUT ON THE
_____ ROAD WHILE WORKING AS SHOWN ON THE BACK OF THIS REPORTNAME _____ TITLE _____
(open here) SEE OTHER SIDE

TO AGENT.

BELOW PLEASE SHOW WHAT EACH ARTICLE WAS USED FOR AND
THE APPROXIMATE LOCATION OF THE JOB FROM THE COUNTY COURT-
HOUSE OR SOME WELL KNOWN TOWN OR RAILROAD STATION.

INSTRUCTIONS

Use this form to report all material and equipment used up, worn out, or missing.

Use carbon paper and make report in duplicate.

A separate report must be made for articles chargeable to each road or bridge; otherwise the cost accounts will be incomplete.

Send the "originals" to the State Road Commission, Capitol Building, Salt Lake City, Utah, each week, and leave the "duplicates" in the book for your future reference.

List and describe all articles accurately to assist the Salt Lake office in properly crediting your account.

**INSTRUCTIONS REGARDING PREPARATION OF
FORM 109, "ITEMIZED STATEMENT
OF PERSONAL EXPENSES"**

1. This blank should be filled out in duplicate by using carbon paper and both copies sent to the Salt Lake office in order that reimbursement for money paid out may be received.

2. It is necessary that this office have both copies in order that the State Auditor may have the original for his file and the State Road Commission retain the duplicate for future reference.

3. All information for which space is provided should be filled out in order that expense shown thereon may not enter into dispute; complete explanation of all items should be given whenever possible.

4. Reimbursement for automobile mileage incurred while using machines (personal) will be obtained through using this form, on which would be shown the terminal points of each trip; the number of miles traveled; why the service was necessary and for what job and designated state road it is chargeable.

5. Expense for telephone service, telegrams, stage fare, automobile hire and railroad fare and other items amounting to \$1.00 or over should be supported by receipts, and if possible same should be made on Form 108, "Employee's Receipt," which is designated for special use in this connection.

6 The total of this form should be shown in space provided on the lower right-hand corner above the autograph signature of the party to whom the expense account is payable.

7. It is desired that expenses listed on this form shall be shown in chronological order.

8. In connection with the statement of personal expenses, it is desired that an explanation be rendered as to the necessity and occasion for incurring such expense. For

example, it is not sufficient to state merely that a certain amount was paid for automobile hire. The occasion and necessity for the trip must be clearly shown.

9. Also, the use of telegraph and long distance telephone should be limited to actual emergency calls. By planning the work and considering the requirements well in advance, the double advantage is obtained of working to well matured plans, and having all materials and equipment on hand and all arrangements made for the prompt and vigorous prosecution of the work.

10. It should be noted that the work of the examining committee of the State Auditor's office is greatly reduced if the "Itemized Statement of Personal Expenses" shows due regard for these instructions, conveying all desired information as to the necessity for the expense, the nature of the work involved, and other factors that indicate whether the account constitutes a proper charge against the State Road Commission. Laxity of methods in preparation of this form of report will certainly result in the delay of the payment.

REPORT OF STATE ROAD COMMISSION

STATE ROAD COMMISSION OF UTAH
ITEMIZED STATEMENT OF PERSONAL EXPENSES

INCURRED BY _____ EMPLOYED AS _____
(Write First Name Out in Full)
DURING THE MONTH OF _____ 19____ WHILE ON BUSINESS OF THE STATE ROAD
COMMISSION IN _____ COUNTY

I certify that this account is a correct and proper charge against the State Road Commission of Utah

Post Office Address _____

INSTRUCTIONS REGARDING FORM 116
"BILLS PAYABLE TRANSMITTAL"

This form is used by the Bills Payable Registrar for use in obtaining signature and information regarding bills payable which are received in this office in an incomplete condition.

All agents should handle this form and attachments with promptness and dispatch in order that payment of the accounts listed thereon may not be delayed.

Special attention is called to the sentence thereon which reads: "Do not detach this letter when returning bills."

REPORT OF STATE ROAD COMMISSION

STATE ROAD COMMISSION OF UTAH

Room 445, State Capitol
Salt Lake City, Utah

Mr.....192.....

State Road Agent,County,
....., Utah

Dear Sir:

The following bills are returned to you for the reason indicated by the number preceding each item.

Reason No.	Name	Amount
.....
.....
.....
.....
.....

Kindly give these your immediate attention and return to this office by next mail. DO NOT detach this letter when returning bills.

Respectfully,

.....
Secretary, State Road Commission.

Reason

- No. 1—Your approval is not shown in space provided.
- 2—Pink copy of Form 105, "Agent's Order," is not attached.
- 3—Pink Form 105-A, "Advice Regarding Agent's Order," is not attached.
- 4—Show on this bill name of road and type of work to which it is chargeable.
- 5—No duplicate of this bill was received. Please attach.

“Weekly Progress Reports.” Resident Engineers on all construction work should fill out “Weekly Progress Report” with all road or bridge report forms provided for that purpose. These reports should be filled out in detail promptly at the end of each week and forwarded as per instructions on these sheets. It is important that each report should show the exact condition of the work at the time report was made.

“Force Account Sheet.” When the Resident Engineer gives the Contractor an order to do “Force Account Work” he should fill out the “Force Account Sheet” provided for this purpose, and which is self-explanatory.

“Surveys.” On all bridge and culvert surveys the Resident Engineer should make the survey with the idea of filling out the “Survey Sheet” for this purpose, sample of which is here completed for your information. It is important that all details in connection with any bridge site should be carefully and completely investigated and recorded showing plan and profile of situations in space provided for them and answer all questions upon data sheet in detail. The Resident Engineer should realize that although the bridge he is surveying may be of simple construction, the designer who has never seen the site will need all the information requested in order to make a proper design for the crossing.

In this connection the office has made careful study of various known formulas to determine the sizes of bridges and culverts, and has compiled this information by platting each formula as a curve as illustrated on accompanying diagram. The State Road Commission having adopted the one marked “USRC” as being the mean and one most adaptable to our locality and particular conditions. This will assist the Locating Engineer in determining the sizes of culverts, pipes and bridges which he may encounter if there are no other precedents such as existing bridges and well defined water marks to govern his decision.

UTAH STATE ROAD COMMISSION
WEEKLY PROGRESS REPORT

Abstract

! — Emergency Alert

[illegible]

EQUIPMENT AND LABOR

GRAPHIC PROGRAM CHART

Summary with Effect of Specialized Equipment

Task	Start	Finish	Duration	Predecessor	Successor
1. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.1. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.2. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.3. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.4. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.5. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.6. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.7. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.8. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.9. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.10. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.11. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.12. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.13. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.14. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.15. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.16. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.17. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.18. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.19. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.20. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.21. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.22. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.23. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.24. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.25. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.26. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.27. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.28. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.29. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.30. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.31. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.32. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.33. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.34. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.35. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.36. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.37. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.38. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.39. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.40. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.41. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.42. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.43. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.44. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.45. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.46. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.47. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.48. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.49. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.50. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.51. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.52. Design of program	1.1.1	1.1.1	1.1.1		2.1.1
2.1.53. Design of program	1.1.1	1.1.1	1.1.1		2.1.1

1.4

1.4

FORCE ACCOUNT SHEET

1.4

MATERIAL

FORCE ACCOUNT

UTAH STATE
ROAD COMMISSION

City _____ County _____
Month of _____ 192 ____
Contract _____
Job _____
Foreman _____

NOTICE TO FOREMEN

Foremen in keeping force account must figure correctly amount of daily labor, also the total of each days labor. In every case where foreman operates on different contracts, keep separate force account for each job.

EXTRA WORK ORDER
Authority to execute the following work:

FWGC- 7763

STATE ROAD COMMISSION OF UTAH
BRIDGE AND CULVERT REPORT
WEEKLY PROGRESS

Contractor _____
Week Ending _____

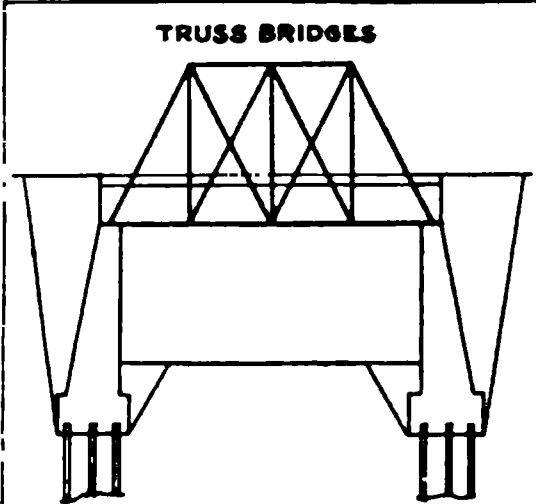
Name of Bridge	Bridge No.	County
Location	Road	
Type	Span	Height
Kind of Abutments	Width of Roadway	Kind of Floor

PROGRESS OF WORK								
	THIS WEEK	TO DATE	PER CENT COMPLETE		THIS WEEK	TO DATE	PER CENT COMPLETE	
Tons of Structural Steel placed in Superstructure				Pounds of Reinforcement placed in Superstructure				
Cu. Yds. of Class "A" Concrete placed in Superstructure				Sq. Ft. of S. D. of Woodwork placed in Superstructure				
Lin. Ft. of Nailing completed in Superstructure				Painting				
Cu. Yds. in Right Abutment (Looking Downstream)				Height of Right Abutment (Looking Downstream)				
Cu. Yds. in Left Abutment (Looking Downstream)				Height of Left Abutment (Looking Downstream)				
Cu. Yds. of Excavation for Foundation				Number of Piles Driven				
Cu. Yds. of Backfill				Lin. Ft. of Piles in Place				
Cu. Yds. in Right Approach (Looking Downstream)				Moving Camp				
Cu. Yds. in Left Approach (Looking Downstream)				Temporary Bridge				
Miscellaneous Work				Sq. Yds. of Pavement on Roadway				

EQUIPMENT AND LABOR															
Date	Day	Foremen	Masons	Quarrymen	Carpenters	Cement Workers	Laborers	2 Hr Teams	4 Hr Teams	Trucks	Trailers	Concrete Mixers	Pumps	Pile Driver	Power Saw
	Sun.														
	Mon.														
	Tues.														
	Wed.														
	Thur.														
	Fri.														
	Sat.														
	Total														

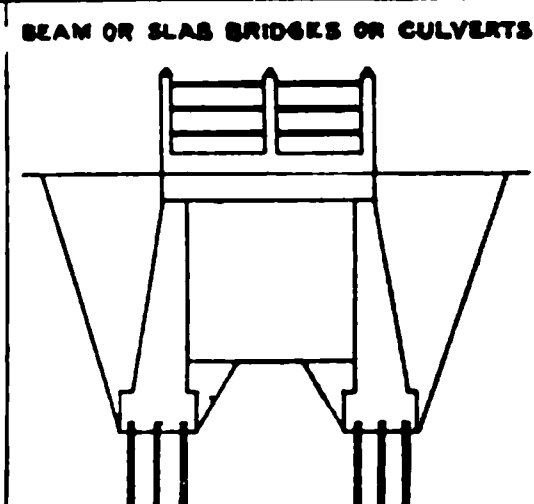
GRAPHIC PROGRESS CHART

TRUSS BRIDGES

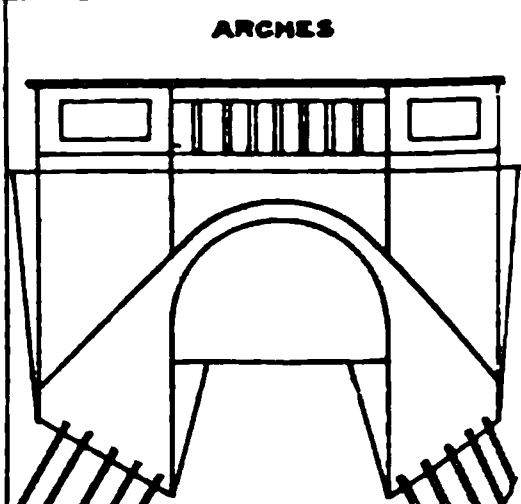


NOTE: Outline in BLUE the portion of excavation completed and crosshatch in RED all other work as completed to date.

BEAM OR SLAB BRIDGES OR CULVERTS



ARCHES



Make report in Triplicate
Original and Duplicate to Chief Bridge Eng., Triplicate to District Eng.
Correct: _____
Inspector or Resident Engineer.

Diagram showing comparison formulas for sizes of Culverts

50' 100' 150' 200' 250 300'
 Area of Cross Section of Waterway, Sq.Ft. = X.



REPORT OF THE ENGINEERING DEPARTMENT OF THE STATE ROAD COMMISSION

Organization.

The Engineering Department of the State Road Commission consists of the State Road Engineer and Assistant Engineer, Chief Bridge Engineer, Office Engineer, five District Engineers, Chief Draftsman; at the present time seven Resident Engineers, Field Engineers, and Draftsmen. The Field Engineers employed, when qualified, have been given Resident Engineers' positions, depleting the Field Engineer force and increasing, during the construction period, the Resident Engineer forces. There has been an average of nine draftsmen employed in the office.

In each county the State Road Commission is represented by a State Road Agent, who operates only in the district assigned to him. They have charge of the road equipment and undertake the construction of small road jobs and maintenance of existing roads.

Purposes.

The purpose of the Engineering Department is to make the surveys of all proposed State and Federal Aid Roads, bridge and culvert sites, and plot the plan, profile and cross sections of the same. From these plats the quantities of earthwork, drainage structures, etc., are computed and compiled into an estimate, on which the Contractors bid. Subsequent to the awarding of the Contract, the Engineers supervise construction and direct the Contractor on the work, and in so doing may make small changes in the interest of economy.

The District Engineer, Resident Engineers, and Road Agents submit reports of their operations showing progress and materials used and labor performed. These reports are tabulated and used for general information and the Biennial Report.

All maps, drawings, specifications, calculations, field notes, photographs, engineering publications and catalogues are indexed and filed in this department.

Estimates from the field for payment for work done by contractors, are computed in this department and turned over to the Accounting Department. Vouchers for Federal

Aid are also made up for presentation to the Government for payment.

All instruments and engineering supplies used are taken care of and issued on demand.

Accomplishments:

The accomplishments of the Engineering Department are shown in the report of the twenty-nine counties, covering the biennium of 1919 and 1920. The reports are segregated into roads and the work is classified into the following divisions: Graded roads, surfaced roads, bridges, culverts, maintenance, and miscellaneous construction, and the total costs and unit costs are given for every part of the work.

Contracts have been let on the following Federal Aid Projects, and these are in various stages of completion:

Project No. 1	Castle Gate-Duchesne	90 % complete
Project No. 2	Ogden-Hooper	complete
Project No. 4	Price-Emery	
	Price-Castle Dale Section	85 % complete
Project No. 5	Thompson-Moab	85 % complete
Project No. 6	Moab-LaSal	90 % complete
Project No. 9	Delta-Holden, Section B & C..	Not started
Project No. 11	Lund-Cedar City	15 % complete
Project No. 12	Cedar City-St. George	Not started
Project No. 14	Tremonton City Paving	Not started
Project No. 24	Price-Castle Gate Grading	
	Contract	35 % complete
Project No. 29	Manti-Pigeon Hollow	3 % complete
Project No. 30	Ogden-Huntsville	4 % complete

In addition to the above projects, on which plans and estimates have been prepared, there are now pending in the office plans on the following projects:

Project No. 17	Levan-Scipio.
Project No. 26	Beaver-Millard.
Project No. 24	Price-Castle Gate (Revised and corrected plans).
Project No. 12	Cedar City-St. George (Revised and changed plans).

Surveys are in the office on the following projects:

Project No. 7	LaSal-Monticello.
Project No. 13	Beaver-Millard.
Project No. 15	Cedar-Beaver County Line.
Project No. 16	Panguitch-Kanab.
Project No. 21	Paragoonah-Orton.
Project No. 23	Sigurd-Loa.
Project No. 33	Morgan County Loop.

It is expected to have plans, estimates and specifications on the following projects completed and approved by the Government by the end of June, in order to absorb Utah's share of Federal Aid yet remaining:

F. A. P. 9	Delta-Holden, Two Sections.
F. A. P. 10	Ft. Duchesne-Vernal.
F. A. P. 12	Cedar City-St. George, Two Sections.
F. A. P. 17	Levan-Scipio.
F. A. P. 19	Marysvale-Panguitch, Section "A."
F. A. P. 24	Price-Castle Gate.
F. A. P. 26	Beaver-Millard Wildcat Section.
F. A. P. 29	Manti-Pigeon Hollow.

During the past biennium the State acquired the east half of the Southeast Quarter of Section 24, Township 4 South, Range 1 West, as a site for a State Gravel Pit, at the same time obtaining a lease on the West Half of the same section for right-of-way purposes. This pit has been operated part of this biennium and supplied gravel to the paving of the Midvale-American Fork Road, and a mile and one-half of Utah County Road. Approximately 31,000 yards of sand and gravel were taken out and delivered on the job for approximately \$0.35 per yard. This gives an aggregate amount of \$11,070.85. If this gravel had been hauled from private pits it would have cost on the job approximately \$0.80 per yard or an aggregate amount of \$25,304.80. A saving of \$14,233.95 was thus effected.

STORAGE YARDS, SHOPS AND EQUIPMENT

In order to provide a permanent place for the storage and repair of supplies and equipment a five-acre tract of land was purchased along Beck Street just south of the Holley Mills in Salt Lake City.

The site is an admirable one for this purpose, having a paved highway on the east and a railroad connection on the west.

The grounds are inclosed with a high board fence and open sheds to provide protection for larger pieces of equipment, while two large storage buildings have been provided for the storage of supplies and small equipment.

A reinforced concrete repair shop has been erected, provided with steam heat and all necessary machinery required in a first-class general repair shop.

Near the entrance to the grounds a five-room cottage has been erected for the use of the watchman.

The State Road Commission has two carloads of repair parts for trucks, the approximate value of which is \$75,000.00; also 80 pieces of large equipment valued at \$76,312.10, consisting of caterpillars, compressors, rock crushers, gas engines, hoisting engines, graders, loaders, mixers, scarifiers, steam shovels, steam rollers, steam pumps, trailers, dump wagons, tractors, etc.

The attached table gives a more comprehensive idea of the equipment on hand.

Interior View of Machine Shop

EQUIPMENT ON HAND

Items	Value	Freight	Cost to State
28 Ford Cars	\$ 11,476.65	\$ 1,770.61	\$ 3,747.76
6 Dodge Cars	7,330.00		7,330.00
2 Overland Cars	2,807.00		2,807.00
2 Studebaker Cars	950.00		950.00
1 Paige Car	1,385.80		1,385.80
6 White Trucks	33,100.00		33,100.00
5 Kelly Springfield Trucks	29,400.00		29,400.00
4 Garford Trucks	17,846.73		17,846.73
1 Ames Ford Truck	975.00		975.00
6 G M C Trucks	12,805.42	981.88	3,387.30
8 Velie Trucks	38,000.00	3,287.92	3,287.92
9 Federal Trucks	42,850.00	3,542.00	3,542.00
76 Nash Quad Trucks	335,160.00	28,725.28	28,725.28
19 International Trucks	33,790.00	3,951.57	3,951.57
14 F W D Trucks	70,910.00	4,416.58	4,416.58
10 Moreland Trucks	47,500.00	3,471.97	3,471.97
23 Packard Trucks	109,250.00	9,343.75	9,343.75
15 Pierce-Arrow Trucks	108,545.00	11,510.85	11,510.85
3 Motorcycles	565.77	61.88	61.88
80 Pcs. Large Road Equipment.	76,312.10	891.00	74,503.10
Plus Parts for Trucks.	75,000.00	800.00	600.00
Totals	\$1,104,959.47	\$ 77,554.79	\$248,343.99

Interior View of Machine Shop.

CONTINGENT—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
CONTINGENT
1919-1920

At the beginning of the biennium there was the net sum of \$4,676.42 remaining in the State Road Fund available for use in Contingent. During the biennium the State appropriated \$35,000.00 and allotted \$162,300.00 from the Bond Fund, making a total of \$201,976.42. Of this sum \$195,599.21 has been expended, leaving a net balance of \$6,377.21 on hand.

EQUIPMENT—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
EQUIPMENT
1919-1920

At the beginning of the biennium there was the net sum of \$879.54 remaining in the State Road Fund available for purchase of Equipment. During the biennium \$2,750.00 was received by refunds, and the State appropriated \$74,000.00, making a total of \$77,629.54. Of this sum \$30,000.00 was returned to Bond Fund from loans, and \$30,976.15 has been expended, leaving a net balance of \$16,653.39 on hand.

LINCOLN HIGHWAY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
Of
LINCOLN HIGHWAY
1919-1920

At the beginning of the biennium there was the net sum of \$4,582.28 remaining in the State Road Fund available for use on the Lincoln Highway. During the biennium \$60,012.25 was contributed by Lincoln Highway Officials, Mr. Sieberling and Mr. Fisher, of Chicago, Ills., and the State appropriated \$104,862.99, making a total of \$169,457.52, which has been available for road construction. Of this sum \$169,190.11 has been expended, leaving a net balance of \$267.41 on hand.

BEAVER COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
BEAVER COUNTY
1919-1920

At the beginning of the biennium, there was the net sum of \$4,173.70 remaining in the State Road Fund available for use in Beaver County. During the biennium \$25,516.65 was raised by Special Road Tax Levy, the State appropriated \$30,500.00, and the County appropriated \$2,500.00, making a total of \$62,690.35, which has been available for road construction. Of this sum \$59,438.32 has been expended, leaving a net balance of \$3,252.03 on hand.

BEAVER COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Beaver-Iron	Earth	\$ 1,479.04	\$ 4,178.99			\$ 5,658.03
Beaver-Milford	Earth	1,222.66	7,378.61			8,596.27
Beaver-Millard	Earth	1,629.96	3,288.79			4,918.75
Milford-Newhouse	Earth	986.46	2,290.84			3,276.80
Miscellaneous						2,374.66
Total.....		5,318.12	17,181.73			\$ 24,824.51

BEAVER COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Beaver-Iron	Earth	\$ 2,930.90	\$ 1,439.86			\$ 4,370.76
Beaver-Milford	Earth	2,383.77	12,617.99			15,001.76
Beaver-Millard	Earth	2,512.90	5,713.83			8,226.73
Milford-Newhouse	Earth		919.86			919.86
Beaver-Piute	Earth	1,551.06	96.44			1,647.50
Miscellaneous						4,447.20
Total.....		\$ 9,378.63	\$ 20,787.98			\$ 34,613.81

BOX ELDER COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In
BOX ELDER COUNTY****1919-1920**

At the beginning of the biennium, there was the net sum of \$3,344.43 remaining in the State Road Fund available for use in Box Elder County. During the biennium \$119,156.24 was raised by Special Road Tax Levy, the State appropriated \$293,950.00, making a total of \$416,450.67, which has been available for road construction. Of this sum \$15,000.00 has been returned to Bond Fund from loans, and \$394,973.71 has been expended, leaving a net balance of \$6,476.96 on hand.

BOX ELDER COUNTY DETAIL OF DISBURSEMENTS 1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Brigham-Collinston	Earth	\$ 34.70	\$ 2,943.44	Dry wash	Reinforced concrete	\$ 2,978.14
Brigham-Tremonton	Earth	2,812.05	5,183.30			7,995.35
Brigham-Weber	Concrete	27,320.26	1,458.59			28,778.85
Brigham-Wellsville	Earth	729.64	565.26			1,294.90
Garland-Cache	Earth	18.19	21.29			2,188.01
Garland-Point Lookout.....	Earth	37.50	4,273.15			37.50
Tremonton-Idaho	Earth	7,346.82				11,619.97
Tremonton-Nevada	Earth	2,686.43				9,126.80
Deweyville-Tremonton	Earth	178.30	9.00			9.00
Elwood School to Sugar Factory.....	Earth		32,757.21			178.30
Brigham City	Concrete					32,757.21
Miscellaneous						7,296.42
Total.....		\$ 73,916.10	\$ 20,894.40		\$ 2,153.53	\$104,260.45

BOX ELDER COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
385623	Earth	\$ 14,761.02	\$ 1,597.44	Bear Creek Canal	Concrete, 18 ft.	\$ 16,358.46
	Earth	1,108.18	1,927.09			3,035.27
	Concrete	211,338.65	1,083.69			212,422.34
	Earth	1,208.25	675.85			1,884.10
	Earth	1,599.63	2,334.56			4,047.82
	Concrete	49,726.65				49,726.65
385625	Earth	47.45				47.45
	Concrete	260.23				260.23
	Earth	50.63	11.98			62.59
	Earth		91.00			91.00
	Earth	44.21				44.21
						2,828.84
Miscellaneous						
Total		\$280,050.00	\$ 7,721.59		\$ 113.63	\$290,713.26

* Credit to adjust erroneous charge on prior account.

CACHE COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
CACHE COUNTY
1919-1920

At the beginning of the biennium, there was the net sum of \$5,050.71 remaining in the State Road Fund available for use in Cache County. During the biennium \$130,511.58 was raised by Special Road Tax Levy, and the State appropriated \$400,800.00, making a total of \$536,362.29 available for road construction. Of this sum \$526,262.01 has been expended, leaving a net balance of \$10,100.28 on hand.

Little Muddy Bridge, Cache County.

REPORT OF STATE ROAD COMMISSION

CACHE COUNTY DETAIL OF DISBURSEMENTS 1919

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Avon-Weber	Earth		\$ 1.00	Logan River	Concrete, 70 ft.	\$ 1.00
Lewiston-Cornish	Earth		172.69			172.69
Logan City Roads	Concrete	*\$ 4,260.88	1,035.54			11,191.50
Logan-Petersboro	Earth		234.27			234.27
Logan-Rich	Earth	4,816.76	1,403.36			6,220.12
Logan-Smithfield	Concrete	69,217.41	337.24			69,554.65
Newton-Clarkston	Earth		625.26			625.26
Newton-Idaho	Earth	1,052.02	1,800.83			2,852.85
Petersboro-Box Elder	Earth		1.00			1.00
Providence-Avon	Earth	38.00	255.04			293.04
Richmond-Idaho	Earth	31.58	567.33			598.91
Richmond-Lewiston	Earth	.57	191.42			191.99
Smithfield-Richmond	Earth	642.16	3,435.50			4,077.66
Wellsville-Brigham	Earth	839.21	6,638.50			7,477.71
Wellsville-Newton	Earth	44.03	485.83			529.86
Logan-Wellsville	Concrete	62,098.13	246.25			62,344.38
Miscellaneous						5,516.48
Total.....		\$134,518.99	\$ 17,481.06		\$ 14,416.84	\$171,888.32

* Credit to adjust erroneous charge on prior accounts.

CACHE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Smithfield-Idaho	Earth	\$ 1,825.84	\$ 2,604.51	Little Muddy Blacksmith Fork	Concrete arch, 40 ft.	\$ 4,429.85
Logan-Smithfield	Concrete	118,844.64	266.00		Concrete arch, 60 ft.	6,287.28
						\$ 9,848.58
						135,846.50
Logan-Garden City	Earth	1,337.78	4,694.86			5,942.59
Smithfield-Richmond	Concrete	196,734.58	592.26			196,826.78
Miscellaneous	Earth	8,083.98	358.55			8,442.53
	Earth	39.21				39.21
Total . . .		\$225,865.46	\$ 8,426.12			4,151.23
						\$354,378.69

CARBON COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In
CARBON COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$11.92 remaining in the State Road Fund available for use in Carbon County. During the biennium \$79,619.81 was raised by Special Road Tax Levy, the State appropriated \$165,350.00, Federal Government appropriated \$5,890.94, making a total of \$250,372.67 available for road construction. Of this sum \$240,961.97 has been expended, leaving a net balance of \$9,410.70 on hand.

Soldier Creek Bridge, Carbon County.

CARBON COUNTY

DETAIL OF DISBURSEMENTS

1919

NAME OF ROAD	Type	ROADS		BRIDGES			Total Disbursements
		Construction	Maintenance	Name	Type and Span	Expended	
Castle Gate-Duchesne	Earth	\$ 16,825.76	\$ 5,607.73	Sta. 672 +00 Sta. 366 +58 Sta. 378 +77	Wood & Stone, 300 ft. Steel-Conc., 18 ft. Steel-Conc., stone, 20 ft.	\$ 893.44 2,611.57 3,466.88	30,259.61 1,284.63 7,294.53
				Sta. 357 +50 Sta. 316 +43	Do Steel-Conc., stone 18 ft.	275.31 578.92	
Castle Gate-Utah	Earth	201.54	1,083.09	Argyl	Wood 30 ft.	2,605.65	
Price-Castle Gate	Earth	2,469.79	4,824.74	Minnie Maud	Wood 20 ft.	781.68	88,110.05
Price-Duchesne	Earth	13,844.82	19,733.75	Soldier Creek No. 2	Wood 36 ft.	1,144.15	
Price-Emery	Earth	741.41	2,489.91	Drunkard's Wash	Concrete 80 ft.	57.22	8,301.60
Price-Sunnyside	Earth	138.72	8,939.96	Miller Creek	Concrete 72 ft.	13.06	
				McCalles Wash	Wood 50 ft.	645.73	
Mud Springs-Emery	Earth	12.25		Coal Creek	Wood 39 ft.	2,091.94	11,820.85 12.25
Wellington-Emery	Earth		1.20	Horse Creek	Wood 76 ft.	4.50	
Hiawatha-Cedar Mesa	Earth		543.69	Colton-Willow	Wood 30 ft.	4,303.81	4,331.14 543.69
Price-Edwards Ranch	Earth	67.25			Wood 38 ft.	26.13	
Miscellaneous							67.25
Total.....		\$ 34,311.54	\$ 43,224.07			\$ 19,499.99	\$121,895.40

REPORT OF STATE ROAD COMMISSION

CARBON COUNTY

DETAIL OF DISBURSEMENTS

1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	Expended
Castle Gate-Duchesne	Earth	\$ 24,893.26	\$ 1,508.92	Horse Creek	Wood truss 30 ft.	\$ 304.56
				Willow Creek	I-Beam 40 ft.	325.58
					Conc. slab 37 ft. 4 in.	325.58
				Sta. 357+50*	I-Beams stone 20 ft.	999.43
Emma Park	Earth	60.37	1,125.39	Price Water Co.	Conc. slab 16 ft.	260.53
Price-Castle Gate	Earth	22,348.86	5,587.86	Spring Canyon	Conc. girder and deck 24 ft.	568.88
				Dry Wash	Concrete slab 12 ft.	151.11
Wellington-Myton	Earth	1,875.93	12,917.20			
Price-Emery	Earth	26,982.91	4,132.46	Drunkard's Wash	2 38-ft. I-beams	3,871.92
					1 18-ft. slab 93 ft.	698.48
				Canal Br. No. 1	I-Beam Conc. 20 ft.	426.13
				Canal Br. No. 2	I-Beam Conc. 20 ft.	380.32
				Canal Br. No. 3	I-Beam Conc. 20 ft.	
				Miller Creek	1 38 ft. I-Beam, 2 30-ft. I-Beams 98 ft.	5,340.24
Price-Sunnyside Junction	Earth	5.78	2,601.20			
Miscellaneous						
Total.....		\$ 76,167.11	\$ 27,872.97			\$ 13,277.18
						\$ 28,031.75
						1,185.76
						28,917.18
						14,798.13
						41,782.46
						2,606.98
						2,748.74
						\$120,066.00

*Total expenditures for this county exceeds by \$999.43 figures shown on recapitulation; due to the fact that all charges on bridge at Station 357+50 were charged against Duchesne County and properly chargeable to this county. See Duchesne County Detail Disbursements.

DAGGETT COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
DAGGETT COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$7,580.79 remaining in the State Road Fund available for use in Daggett County. During the biennium \$2,625.47 was raised by Special Road Tax Levy, and the State appropriated \$20,350.00, making a total of \$30,556.26, which has been available for road construction. Of this sum \$28,924.47 has been expended, leaving a net balance of \$1,631.79 on hand.

DAGGETT COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Linwood-Wyoming	Earth	\$ 1,503.88	\$ 100.71	Henry's Fork		\$ 1,604.59
Linwood-Manila	Earth	4,720.64	27.93			13,645.90
Miscellaneous	Earth	10,568.98	126.56			1,140.81
Manila-Wyoming		16,793.00	255.20			10,695.54
Total.....						\$ 27,086.84

DAGGETT COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Linwood-Manila	Earth	\$ 2,214.45	\$ 2,139.25	Henry's Fork	Wood Truss 80 ft.	\$ 1,117.57
Forest Road No. 10	Earth	50.00	56.25			106.25
Miscellaneous						613.81
Total.....		\$ 2,264.45	\$ 2,195.50			\$ 1,837.63

* Received from Sweetwater County, Wyo., on account expenditures during 1919.

DAVIS COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In****DAVIS COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$14,039.18 remaining in the State Road Fund available for use in Davis County. During the biennium \$43,261.04 was raised by Special Road Tax Levy, and the State appropriated \$522,450.00, making a total of \$579,750.22, which has been available for road construction. Of this sum \$579,726.31 has been expended, leaving a net balance of \$23.91 on hand.

Farmington Overhead Crossing, Davis County.

DAVIS COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS			BRIDGES		Total Disburse-ments
	Type	Construction	Maintenance	Name	Type and Span	
Farmington-Salt Lake	Concrete	\$138,175.42	\$ 17,726.08	Farmington Overhead Crossing Davis-Weber Canal Davis-Weber Canal Farmington Creek	Steel Girders	\$155,901.50
Farmington-Weber	Concrete	193,655.72	20,811.50		Concrete 100 ft.	
					Concrete 19 ft.	
					Concrete 21 ft.	
South Weber	Earth	3,688.24	1,605.68		Concrete 16 ft.	221,839.40
North Salt Lake-Cudahy	Concrete	27.66				5,298.92
Miscellaneous						27.66
Total.....		\$335,547.04	\$ 40,143.26		\$ 7,372.18	\$395,779.38

DAVIS COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Farmington-Centerville	Concrete	\$ 5,314.00	\$ 563.68	Farmington over-head Crossing Davis-Weber Canal Farmington Creek	Plate Girder Conc. on piles 100 ft. Concrete 21 ft. Concrete 16 ft.	\$ 5,877.68
Farmington-Weber	Concrete	201.72	10,447.86			
Sunset-Clearfield	Concrete	9,767.40				
South Weber	Earth	3.75	1,985.33			
Farmington City	Concrete	91,107.87				
Riverdale-Morgan	Earth		3,399.63			70,896.81
Kaysville-Layton	Concrete	122.79				9,767.40
Miscellaneous						1,989.08
Total.....		\$106,517.53	\$ 16,396.50		\$ 60,247.23	\$183,946.93

DUCHESNE COUNTY—**Statement of****APPROPRIATIONS AND DISBURSEMENTS****DUCHESNE COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$1,597.27 remaining in the State Road Fund available for use in Duchesne County. During the biennium \$14,039.19 was raised by Special Road Tax Levy, the State appropriated \$213,500.00, and the Federal Government appropriated \$22,021.11, making a total of \$251,157.57, which has been available for road construction. Of this sum \$239,257.43 has been expended, leaving a net balance of \$11,900.14 on hand.

Price-Castle Gate Road, Duchesne County.

DUCHESNE COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Duchesne-Carbon	Earth	\$109,768.93	\$ 7,227.26	Steel I-Beam Sta. 357 + 50	Steel Concrete Stone 20 ft.	\$ 5,138.69
Duchesne-Uintah	Earth	5,787.22	6,768.44	Sta. 316 + 43 Dry Wash	Conc. and Stone 16 ft.	20.50
Duchesne-Utah	Earth		415.61	Hartley	Wood and piles 16 ft.	383.70
Duchesne-Wasatch	Earth		3,710.26			259.97
Myton-Carbon	Earth	11,033.74	4,849.19			
Duchesne-Stockmore	Earth		47.99			
Miscellaneous						
Total.....		\$126,589.89	\$ 23,018.75			\$ 5,802.86
						\$122,155.38
						13,199.33
						415.61
						3,710.26
						15,882.98
						47.99
						6,705.23
						\$162,116.73

DUCHESNE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Duchesne-Carbon	Earth	\$ 43,601.03	\$ 5,506.11	No Name	I-Beam Conc. 20 ft.	\$ 54,830.71
Duchesne-Roosevelt	Earth	1,526.14	8,632.91	Leavitt's Station	I-Beam Conc. 30 ft.	10,159.05
Myton-Carbon	Earth	1,013.00	2,376.33			3,389.33
Duchesne-Wasatch	Earth	175.63	1,691.58			1,867.21
Stockmore-Wasatch	Earth	578.20	4.32			582.52
Miscellaneous						5,312.45
Total.....		\$ 46,894.00	\$ 18,211.25		\$ 5,728.57	\$ 76,141.27

NOTE—Total expenditures for this country are less by \$999.43 under Recapitulation Sheet, due to the fact that all charges on bridge at Sta. 857+50 were erroneously charged to Duchesne County and properly chargeable to Carbon County. (See Carbon County Detail of Expenditures.)

EMERY COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
EMERY COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$204.60 remaining in the State Road Fund available for use in Emery County. During the biennium \$61,684.09 was raised by Special Road Tax Levy, the State appropriated \$207,500.00, and the Federal Government appropriated \$17,741.38, making a total of \$287,130.07, which has been available for road construction. Of this sum \$9,000.00 has been returned to Bond Fund from Loans, and \$259,862.56 has been expended, leaving a net balance of \$18,267.51 on hand.

EMERY COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS		BRIDGES		Total Disburse-ments
	Type	Construction	Maintenance	Name	Type and Span
Castle Dale-Carbon	Earth	\$ 3,388.14	\$ 4,548.46	5 Mile Wash No. 2 Lawrence Wash Steel and Rock Sand Wash Muddy Creek Wash Canal B. L. 5 Mile Wash No. 1 Wilberg Wash Rock Creek Rochester Plat Buckhorn	Wood and Conc. 18 ft. Wood and piles 34 ft. Huntington Cr. 50 ft. Concrete 20 ft. Conc. 8x 8 culvert Conc. 9x12 culvert Steel and Conc. 27 ft. Steel and Conc. 35 ft. Steel and Conc. 26 ft. Concrete 53 ft. Wood Truss 32 ft.
Castle Dale-Green River	Earth	216.97	1,377.46		\$ 1,521.50 1,183.94 52.24 22.32 2,126.34 423.49 5.20 47.71 3,230.00 24.20 578.14
Castle Dale-Sanpete	Earth	21,967.98	547.65		\$ 13,319.34
Castle Dale-Sevier	Earth	1,976.73	5,238.26		4,848.63
Green River-Carbon	Earth	8,809.25	1,663.84		22,515.63
Mohrland Road	Earth		386.76		7,793.13
Lawrence-Carbon	Earth	1,567.40	771.86		10,473.09
Huntington-Sanpete	Earth	4,844.07			386.76
Mohrland-Black Hawk	Earth	106.93	1,121.66		2,339.26
Miscellaneous					4,844.07
Total.....		\$ 42,877.47	\$ 15,655.95		1,228.59
					5,683.68
					\$ 73,432.18

EMERY COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	Expended
Castle Dale-Carbon	Earth	\$ 72,972.59	\$ 7,298.17	5 Mile Wash No. 2 Blue Out Canal Wash Bridge No. 1 Wash Bridge No. 2	Log Stringer 18 ft. Conc. Slab 15 ft. Conc. Slab 18 ft. 1 32 I-Beam 76 ft. Steel Truss 85 ft.	\$ 718.20 275.63 120.90 1,417.61 168.14
Castle Dale-Emery	Earth	122.30	2,098.44	2 1/2 Mile Wash Sand Wash Canal Bridge Canal Bridge Canal Bridge 7 Mile Wash	1-Beams 80 ft. 1-Beams 80 ft. 1-Beams 38 ft. 1 30-ft. I-Beam 1 32-ft. I-Beam 1 18-ft. Slab 1 32-ft. I-Beam 2 15-ft. Slabs Conc. Slab 15 ft. Concrete Slab 10 ft. Concrete Slab 10 ft. Conc. Box Culv.	693.69 9,773.90 10,587.04 28,682.09 8,899.50 1,884.78 780.91 1,091.31 4,162.66
Huntington-Sanpete	Earth	6,487.31	356.92			\$7,612.83
Emery-Sevier	Earth	45.53	1,712.10			5,844.23
Green River-Carbon	Earth	2,256.66	1,519.50			1,757.63
Orangeville-Sanpete	Earth	18,980.84	150.07			2,776.16
Miscellaneous						19,189.91
Total		\$ 99,874.23	\$ 13,185.20			\$ 68,674.26
						\$186,480.39

GARFIELD COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In
GARFIELD COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$4,138.47 remaining in the State Road Fund available for use in Garfield County. During the biennium \$9,374.92 was raised by Special Road Tax Levy, and the State appropriated \$60,450.00, making a total of \$73,963.39, which has been available for road construction. Of this sum \$73,917.93 has been expended, leaving a net balance of \$45.46 on hand.

GARFIELD COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Escalante-Piute	Earth	\$ 9,710.91	\$ 1,300.07			\$ 11,010.98
Hillsdale-Henrieville	Earth		1,151.76			1,151.76
Panguitch-Kane	Earth	5,117.43	1,888.42			7,005.85
Panguitch-Piute	Earth	1,142.61	1,772.55			2,915.16
Orton-Iron	Earth	359.59	65.25			424.84
Miscellaneous						1,623.69
Total		\$ 16,330.54	\$ 6,178.05			\$ 24,132.28

GARFIELD COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Winder-Coyote	Earth	\$ 35,896.45	\$ 1,212.21	Deer Creek	Log Stringers 20 ft.	\$ 37,109.80
Escalante-Winder	Earth	75.47	54.49	East Fork		
Panguitch-Kane	Earth	1,795.87	2,859.88	Sevier River	Wood Truss 36 ft.	1,828.40
Panguitch-Piute	Earth	588.47	2,852.26	South Field	Log Stringers 14 ft.	4,955.11
Orton-Iron	Earth		132.00			8,440.78
Miscellaneous						182.00
Total.....		\$ 38,356.26	\$ 7,110.75			2,825.11
					\$ 1,493.53	\$ 49,785.65

GRAND COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In
GRAND COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$2,860.46 remaining in the State Road Fund available for use in Grand County. During the biennium \$31,017.36 was raised by Special Road Tax Levy, the State appropriated \$225,000.00, Federal Government appropriated \$54,150.59, and the County appropriated \$54,000.00, making a total of \$367,028.41. Of this sum \$5,000.00 has been returned to the Bond Fund from loans, and \$359,545.62 has been expended, leaving a net balance of \$2,482.79 on hand.

Raising Grand River Bridge Four Feet, Grand County.

Pack Creek Bridge, Grand County.

GRAND COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Moab-Castleton	Earth	\$ 1,580.72	\$ 807.81	Court House No. 2	Conc. Slab 20 ft.	\$ 3,887.82
Moab-San Juan	Earth	832.52	2,126.69	Court House No. 1	Steel Conc. 100 ft.	2,959.21
Moab-Valley City	Earth	11,555.26	2,732.38	Mill Creek	Wood Truss 36 ft.	15.75
				Thompson Wash	Steel Conc. 30 ft.	422.73
				Moab Canyon	Steel Conc. 30 ft.	3,366.37
Valley City-Thompsons	Earth	5,795.70	2,045.73	Klondyke Wash	Steel Conc. 30 ft.	22.28
				Crescent Wash	Concrete 20 ft.	19.60
					Masonry, Wood 12 ft.	399.50
Valley City-Green River	Earth	9,418.38	8,418.51			18,533.87
Miscellaneous						7,841.43
Total.....		\$ 29,182.58	\$ 15,131.12			17,836.89
						8,382.58
						\$ 59,441.80

GRAND COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	Expended
Thompson-Moab	Earth	\$190,859.67	\$ 3,395.71	*Court House Wash No. 1 Grand River	Steel Truss 100 ft. Steel spans: 3 200 ft. 600 ft.	\$ 4,962.38
				Thompson Wash Moab Canyon Wash	I-Beams 30 ft.	9,760.35
				No. 1	Concrete 20 ft.	2,417.53
				Moab Canyon Wash No. 2		8,978.66
				Court House Wash No. 1	Conc. Girder 28 ft.	506.01
				Klondyke Wash 7 Mile Wash	Submerged 400 ft.	12,831.98
					Concrete Gird. 48 ft. I-Beams Masonry 30 ft.	7,754.00
					Wood Truss 80 ft.	2,700.60
Moab-San Juan	Earth			Pack Creek		13,804.24
Moab-Colorado	Earth	32,342.31	356.06	Mill Creek		8,187.39
Valley City-Green River	Earth	136.18	1,784.20			
Valley City-Cisco			1,941.92			
Miscellaneous			171.15			
Total.....		\$223,338.16	\$ 7,649.04			\$ 61,903.09
						\$300,103.82

* Raising of bridge only.

IRON COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
IRON COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$1,489.76 remaining in the State Road Fund available for use in Iron County. During the biennium \$34,918.84 was raised by Special Road Tax Levy, the State appropriated \$124,700.00, Federal Government appropriated \$9,044.11, and the County appropriated \$30,000.00, making a total of \$200,152.71 which has been available for road construction. Of this sum \$174,027.42 has been expended, leaving a net balance of \$26,125.29 on hand.

IRON COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Cedar-Kane	Earth	\$ 6,016.98	\$ 1,343.23	Coal Creek	Wood and Stone, 30 ft. Span	\$ 7,394.85
Cedar-Lund	Earth	2,569.46	3,895.72			6,465.18
Parowen-Beaver	Earth	2,506.11	5,152.49	Winns Wash Cedar City	Wood Concrete, 30 ft. Span	2,882.46
Cedar-Washington	Earth				Wood Steel Concrete 50 ft. Span	507.05
Parowan-Lund	Concrete	16,470.17	1,815.57			10,498.11
Paragoonah-Garfield	Earth	922.60	396.13			18,285.74
Modena-Washington	Earth	1,563.66	270.36			1,318.73
Parowan-Cedar	Concrete	1,345.75	148.54			1,834.02
Miscellaneous	Earth	3,549.23	5,057.97			1,494.29
Total.....		\$ 34,943.96	\$18,080.01			8,607.20
						4,197.28
						\$ 60,094.90

IRON COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Cedar-Kane		\$ 39,622.77	\$ 981.46	Horse Hollow	Submerged Conc. 200 ft.	\$ 40,554.23
Cedar-Lund		53,104.96	4,049.90			
Cedar-Washington		* 13,141.48	5,621.69	Sta. 1613 + 36 Shirtz Creek Shirtz Flood	Concrete 12 ft. I-Beams Conc. 38 ft. I-Beams Conc. 38 ft.	57,915.43
Cedar-Buckhorn		287.96	773.39	Winn's Wash		6,437.32
Buckhorn-Beaver		268.95	1,403.35			1,061.35
Cedar-Beaver		400.35	5,079.10		Log Stringer Mas. 20 ft.	1,672.30
Modena-Washington		11,980.00	322.17			5,195.70
Paragoonah-Garfield .....		.17	852.63			12,302.17
Miscellaneous						852.46
Total.....		\$ 92,523.34	\$ 19,038.69		\$ 1,559.29	\$ 113,932.52

* Credit to adjust erroneous charge on prior account.
† Credit account empty cement sacks returned.

JUAB COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
JUAB COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$11,074.15 remaining in the State Road Fund available for use in Juab County. During the biennium \$29,973.59 was raised by Special Road Tax Levy, and the State appropriated \$24,200.00, making a total of \$65,247.74, which has been available for road construction. Of this sum \$63,730.25 has been expended, leaving a net balance of \$1,517.49 on hand.

JUAB COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Boulter-Diamond	Earth		\$ 1,026.50			\$ 1,026.50
Eureka-Millard	Earth	\$ 3,513.94	13.60			3,527.54
Eureka-Tintic	Earth	2,151.87	1,213.18			3,365.05
Eureka-Tooete	Earth		14.40			14.40
Eureka-Utah	Earth		119.00			119.00
Levan-Millard	Earth	25,602.14	1,426.07	Chicken Creek	Concrete culv. 4 5x 12.5 span	27,045.96
Levan-Sanpete	Earth		307.78			307.78
Nephi-Levan	Earth	561.44	4,727.25			5,288.69
Nephi-Sanpete	Earth		649.11			649.11
Nephi-Utah	Earth	27.34	402.46			429.80
Juab-Mills-Millard	Earth	3,705.90	214.41			3,920.31
Miscellaneous						3,602.57
Total.....		\$ 35,562.63	\$ 10,113.76		\$ 17.75	\$ 49,296.71

JUAB COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Levan-Millard	Earth	\$ 3,438.42	\$ 2,868.26	Red Pt. Wash	Conc. I-Beam 24 ft.	\$ 6,230.58
Nephi-Sanpete	Earth	18.05	2,433.43			2,451.54
	Earth	25.97	838.34			864.31
	Earth	224.44	1,235.37			1,459.81
Miscellaneous						8,427.80
Total		\$ 3,706.88	\$ 6,875.46		\$ 423.90	\$ 14,433.54

KANE COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
KANE COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$9,162.70 remaining in the State Road Fund available for use in Kane County. During the biennium \$12,795.90 was raised by Special Road Tax Levy, and the State appropriated \$14,250.00, making a total of \$36,208.60, which has been available for road construction. Of this sum \$36,193.93 has been expended, leaving a net balance of \$14.67 on hand.

Elbo Wash Bridge, Kane County.

KANE COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Gravel Springs-Garfield	Earth	\$ 492.38	\$ 86.62	Johnson Wash	Wood and Piling	\$ 579.00
Kanab-Johnson Gravel Springs	Earth	3,420.35	2,403.69		25 ft.	5,824.04
Kanab-Mt. Carmel	Earth	1,800.31	142.93		Wood and Rock 30 ft.	
Mt. Carmel-Gravel Springs	Earth	2,516.73	2,449.93	Black Rock	Log Truss 45 ft.	2,370.00
				Kanab Creek No. 2	Wood and Masonry	
				Kanab Creek No. 1	81 ft.	
Mt. Carmel-Iron	Earth	361.05		Dry Wash	Wood and Logs	5,128.16
					24 ft. Span	861.05
						865.48
Kanab-Arizona	Earth	865.43	130.04			1,047.21
Kanab-Panguitch	Earth	917.17				2,509.90
Miscellaneous						
Total.....		\$ 10,373.42	\$ 5,213.21		\$ 588.26	\$ 18,679.79

KANE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Long Valley-Iron	Earth	\$ 28.54	\$ 11.30	Johnson Wash Elbow Wash	Log Stringers 95 ft. Wood Truss and Stringers 2 at 16 ft; 1 at 40 ft.	\$ 39.84
Kanab-Garfield	Earth	78.86	2,292.52			2,371.38
Kanab-Johnson-Gravel Springs	Earth	1,317.56	3,742.00			
Kanab-Arizona	Earth	148.23	1,437.83		1,691.76	12,146.44
Miscellaneous						1,586.06
Total.....		\$ 1,573.19	\$ 7,483.65		\$ 7,086.88	\$ 17,514.14

MILLARD COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
MILLARD COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$432.25 remaining in the State Road Fund available for use in Millard County. During the biennium \$74,197.38 was raised by Special Road Tax Levy, and the State appropriated \$22,500.00, making a total of \$97,129.63, which has been available for road construction. Of this sum \$68,893.89 has been expended, leaving a net balance of \$28,235.74 on hand.

MILLARD COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Cove-Sevier	Earth	\$ 495.30	\$ 157.54			\$ 652.84
Delta-Holden	Earth	682.44	2,091.81			2,774.25
Delta-North Tract	Earth		909.38			909.38
Delta-Lynndyl	Earth	2.63	252.13			254.76
Fillmore-Beaver	Earth	3,040.17	12,002.87			15,043.04
Fillmore-Cedar Mt.	Earth		306.53			306.53
Fillmore-Holden	Earth	200.14	874.89			1,075.03
Holden-Oasis	Earth	197.84	510.28			708.12
Holden-Scipio	Earth	1,789.58	6,812.64			8,602.22
Oasis-Hinckley	Earth		765.98			765.98
East Scipio-Juab	Earth	248.56	6.75			255.31
West Scipio-Juab	Earth		224.63			224.63
Miscellaneous						2,414.41
Total.....		\$ 6,656.66	\$ 24,915.43			\$ 33,986.50

MILLARD COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Kanosh-Beaver	Earth	\$ 84.55	\$ 5,421.77			\$ 5,506.32
Holden-Scipio	Earth	637.97	4,440.08			5,078.05
Holden-Kanosh	Earth	302.84	4,553.48			4,856.32
Delta-Holden	Earth	3,854.95	3,784.11			7,639.06
Scipio-Juab	Earth	2,392.53	858.44			3,250.97
Cove Fort-Sevier	Earth	2,978.51	86.14			3,064.65
Miscellaneous						5,512.02
Total.....		\$ 10,251.85	\$ 19,144.02			\$ 34,907.89

MORGAN COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
MORGAN COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$753.87 remaining in the State Road Fund available for use in Morgan County. During the biennium \$33,215.08 was raised by Special Road Tax Levy, the State appropriated \$13,100.00, making a total of \$47,068.95, which has been available for road construction. Of this sum \$39,017.12 has been expended, leaving a net balance of \$8,051.83 on hand.

MORGAN COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
North Morgan-Peterson	Earth		\$ 420.64	Peterson	Steel Wood Log 100 ft.	\$ 420.64
Devil's Slide-Crayden	Earth		12.35			
Devil's Slide-Henefer	Earth	\$ 217.37	2,976.11	Gordon	Concrete 18 ft. Span	3,042.50
Morgan-Devil's Slide	Earth	27.97	3,042.91	Strawberry	Concrete 18 ft. Span	3,193.48
Morgan-Porterville	Earth	746.70	1,073.20			3,070.88
Morgan-Weber	Earth	586.06	2,012.75			1,819.90
Miscellaneous						2,598.81
Total.....		\$ 1,578.10	\$ 9,537.96		\$ 3,030.15	\$ 21,110.59

MORGAN COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Peterson-Weber	Earth	\$ 299.18	\$ 3,607.61	Gordon Creek	Concrete 20 ft.	\$ 3,941.79
Morgan-Devil's Slide	Earth	1,464.42	1,354.42			2,818.84
Morgan County Loop	Earth	2,753.35	7,186.81			9,890.16
Miscellaneous						1,255.74
Total.....		\$ 4,516.95	\$ 12,098.84		\$ 35.00	\$ 17,906.53

PIUTE COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
PIUTE COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$489.27 remaining in the State Road Fund available for use in Piute County. During the biennium \$14,668.68 was raised by Special Road Tax Levy, the State appropriated \$22,350.00, making a total of \$37,507.95, which has been available for road construction. Of this sum \$36,845.27 has been expended, leaving a net balance of \$662.68 on hand.

PIUTE COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Junction-Circleville	Earth	\$ 2,803.43	\$ 2,123.03	Red Br.	Wood and Conc. 59 ft.	\$ 5,479.83
Junction-Coyote	Earth	233.19	2,566.87			2,800.06
Junction-Marysvale	Earth	2,669.06	1,782.28			4,451.34
Marysvale-Sevier	Earth	2,116.61	1,883.26	Deer Creek Beaver Creek	Wood and Logs 14 ft. Reinforced Concrete and Logs 15 ft.	4,137.15
Loa-Burrville	Earth	10.52	85.16			95.68
Miscellaneous						2,729.14
Total.....		\$ 7,832.81	\$ 8,440.60		\$ 690.65	\$ 19,693.20

PIUTE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Junction-Circleville	Earth	\$ 268.55	\$ 2,746.86	Red Br.	Masonry Abt., Steel Deck 75 ft.	\$ 320.69 \$ 3,336.10
Junction-Coyote	Earth	167.24	2,541.84			2,709.08
Junction-Marysville	Earth	2,437.84	2,912.67			5,350.51
Marysville-Sevier	Earth	702.50	1,882.97	Deer Creek	Concrete 10 ft.	2,666.37
Loa-Burrville	Earth		94.50			94.50
Miscellaneous						1,194.56
Total.....		\$ 3,576.13	\$ 10,178.84			\$ 401.59 \$ 15,351.12

NOTE—Total expenditures for this county exceeds recapitulation sheet by \$1,800.95, account of over remittance of this amount by County Treasurer in 1919.

RICH COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
RICH COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$4,366.97 remaining in the State Road Fund available for use in Rich County. During the biennium \$14,131.94 was raised by Special Road Tax Levy, and the State appropriated \$36,100.00, making a total of \$54,598.91 available for road construction. Of this sum \$54,377.96 has been expended, leaving a net balance of \$220.95 on hand.

RICH COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS		BRIDGES		Total Disburse-ments
	Type	Construction	Maintenance	Name	
Evanston-Summit	Earth	\$ 111.96	\$ 681.63		\$ 793.59
Garden City-Cache	Earth		1,026.85		1,026.85
Garden City-Idaho	Earth	10.00	43.00		53.00
Garden City-Laketown	Earth		305.37		305.37
Woodruff-Weber	Earth	334.47			334.47
Randolph-Evanston	Earth		3,643.20		3,643.20
Randolph-Sage Creek	Earth		123.25		123.25
Miscellaneous					968.62
Total.....		456.43	5,823.30		\$ 7,248.35

RICH COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Randolph-Woodruff	Earth	\$ 247.90	\$ 2,295.11	Echo Canyon No. 1 Echo Canyon No. 2	Concrete 16 ft. Concrete 14 ft.	\$ 2,543.01
Woodruff-Weber	Earth	18.93	41.59			60.52
Garden City-Cache	Earth	10,783.04	41.58			10,824.62
Wyoming-Summit	Earth	26,329.22				26,708.43
Miscellaneous						6,998.08
Total.....		\$ 37,379.09	\$ 2,378.28			\$ 47,129.61

SALT LAKE COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In****SALT LAKE COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$19.96 remaining in the State Road Fund available for use in Salt Lake County. During the biennium \$143,147.75 was raised by Special Road Tax Levy, the State appropriated \$527,700.00, and the Federal Government appropriated \$10,000.00, making a total of \$680,867.71, which has been available for road construction. Of this sum \$680,822.98 has been expended, leaving a net balance of \$44.73 on hand.

Canal Bridge, Salt Lake County.

Canal Bridge, Salt Lake County.

SALT LAKE COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Emigrant Trail	Earth	\$ 261.75	\$ 36.85			\$ 298.60
East Twenty-first South	Earth	5,943.32	86.05			6,149.67
East Thirty-third South	Bitulithic	120.30				123.62
Parley's Canyon	Earth	110.02	13.60			73,440.59
Magna-Tooele	Earth	72,782.72	657.87			4,644.69
	Earth	3,024.10	1,356.09			3.60
Salt Lake City Roads	Concrete		264.50			1,529.25
Salt Lake-Davis	Concrete	655.00	3.60			
Salt Lake-Utah	Concrete	88.56	874.25			
	Earth	115,712.54	402.33			
West Twenty-first South	Bitulithic	94,478.83	2,782.20	Canal Crossing	Concrete 22 ft. Span	229,100.38
West Thirty-third South	Concrete	9.68		Canal Crossing	Concrete 22 ft. Span	9.68
	Concrete	209.04	139.48	Canal Crossing	Concrete 22 ft. Span	
	Earth	761.61	832.64	Canal Crossing	Concrete 22 ft. Span	
Capitol-St. Marks	Bitulithic	59,695.90	487.23	Canal Crossing	Concrete 16 ft. Span	62,075.90
Miscellaneous	Concrete	19,102.39		Canal Crossing	Concrete 16 ft. Span	19,102.39
	Earth				Concrete 22 ft. Span	10,247.06
Total.....		\$372,955.76	\$ 7,886.69		\$ 15,635.92	\$406,725.43

Paving on Midvale-Salt Lake Road, Salt Lake County.

Salt Lake, Utah, Road, Salt Lake County.

SALT LAKE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Salt Lake-Midvale	Concrete	\$ 19,243.75	\$ 3,615.74	Mill Creek	Concrete 10 ft.	\$ 22,860.03
Midvale-Utah	Concrete	72,078.45	2,128.09	Canal Crossing	Concrete Beam 22 ft.	74,124.70
West Thirty-third South	Bitulithic					
Magna-Tooele	Concrete	81,584.28	5,856.23			87,440.51
Salt Lake-Davis	Earth	2,743.59	8,448.52			11,192.11
Parley's Canyon	Concrete	* 2,490.67	795.33			* 1,695.84
†Twenty-first South	Earth	66,934.36	993.10			67,927.46
Miscellaneous	Earth	7,179.92	630.61			7,810.53
Total.....		\$247,273.68	\$ 22,467.62			4,437.55
					*\$ 81.30	\$274,097.55

* Credit account empty cement sacks returned.
† Additional expense by Salt Lake County; figures not available at time of publication.

SAN JUAN COUNTY—**Statement of****APPROPRIATIONS AND DISBURSEMENTS****In****SAN JUAN COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$10.45 remaining in the State Road Fund available for use in San Juan County. During the biennium \$20,110.24 was raised by Special Road Tax Levy, the State appropriated \$162,300.00, and the Federal Government appropriated \$45,378.59, making a total of \$227,799.28, which has been available for road construction. Of this sum \$227,771.11 has been expended, leaving a net balance of \$28.17 on hand.

Mule Shoe Bridge, San Juan County.

SAN JUAN COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Bluff-San Juan Br.....	Earth	\$ 259.18	\$ 76.58	Little Mule Shoe Kane Springs Wash Pack Creek Crossing	I-Beam 40 ft. Span Steel Conc. Rock 40 ft. Span Conc. I-Beam 20 ft.	\$ 835.76
LaSal-Colorado	Earth	5,862.08	348.55			6,210.63
LaSal-Grand	Earth	35,584.92	761.20			
Monticello-Bluff	Earth	3,625.89	1,850.81			46,114.72
Monticello-Colorado	Earth	64.60	165.00			5,476.70
Monticello-LaSal	Earth	3,238.60	2,029.85			229.60
Miscellaneous						5,268.45
Total.....		\$ 48,635.27	\$ 5,231.99		\$ 9,768.60	\$ 67,662.05

SAN JUAN COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS			BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	Expended	
LaSal-Monticello	Earth	\$ 1,599.93	\$ 413.19	Mule Shoe Kane Springs Pack Creek Little Mule Shoe	I-Beam Masonry I-Beam Masonry 40 ft. Conc. Slab 20 ft. Wood 27 ft.	\$ 2,259.75 508.98 106.75 182.99	\$ 2,013.12 298.62
Monticello-Blanding	Earth	105.89	192.73				
LaSal-Grand	Earth	148,433.41	792.42				
Blanding-Bluff	Earth	163.13	2,988.86				152,234.25 3,151.99 2,411.08
Miscellaneous							
Total.....		\$150,302.36	\$ 4,387.20			\$ 3,008.42	\$160,109.06

SAN PETE COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In
SAN PETE COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$16.47 remaining in the State Road Fund available for use in San Pete County. During the biennium \$24,793.54 was raised by Special Road Tax Levy, the State appropriated \$67,950.00, and the County appropriated \$25,000.00, making a total of \$117,760.01, which has been available for road construction. Of this sum \$95,481.02 has been expended, leaving a net balance of \$22,278.99 on hand.

SANPETE COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Ephraim-Emery	Earth	\$ 13,446.16	\$ 193.32	San Pitch River	Concrete 48 ft.	\$ 13,639.48
Ephraim-Mt. Pleasant	Earth	961.73	1,655.30			2,617.03
Fairview-Emery	Earth	4,941.18	1,091.81			6,032.99
Fairview-Utah	Earth	128.04	1,450.74			1,578.78
Gunnison-Juab	Earth	243.99	892.02			1,136.01
Gunnison-Sevier	Earth	15.40	2,844.70			2,484.36
Manti-Ephraim	Earth	952.97	580.24			
	Concrete	141.46				
Manti-Gunnison	Earth	114.88	2,028.38			1,674.67
Mayfield Branch	Earth	517.71				2,143.26
Moroni-Chester	Earth	282.79	541.16			517.71
Moroni-Juab	Earth	147.50	1,270.12			823.95
Mt. Pleasant-Fairview	Earth		1,740.90			1,417.62
Mt. Pleasant-Moroni	Earth	3.00	576.19			1,740.90
Mt. Pleasant City	Earth	386.95				579.19
Miscellaneous	Concrete	16.50				403.45
Total.....		\$ 22,300.26	\$ 14,364.88		\$ 74.26	\$ 41,401.37

SANPETE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Pigeon Hollow-Fairview	Earth	\$ 121.87	\$ 4,986.84	San Pitch River	Concrete. Abut., Steel Truss 50 ft.	\$ 5,108.71
Fairview-Emery	Earth	58.31	1,665.56			1,728.87
Fairview-Utah	Earth		822.81			822.81
Ephraim-Orangeville	Earth	14,472.96	272.48			14,745.44
Pigeon Hollow-Juab	Earth	135.54	4,036.38			4,171.92
Manti-Sevier	Earth	1,099.89	7,393.01			
Manti-Pigeon Hollow	Earth	4,472.43	1,029.45			19,020.98
Mt. Pleasant City	Earth		6.03			5,501.88
Miscellaneous						6.08
Total.....		\$ 20,361.00	\$ 20,212.56		\$ 10,528.03	2,978.06
					\$ 10,528.03	\$ 54,079.65

SEVIER COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
SEVIER COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$13.77 remaining in the State Road Fund available for use in Sevier County. During the biennium \$38,616.71 was raised by Special Road Tax Levy, and the State appropriated \$229,500.00, making a total of \$268,130.48, which has been available for construction work. Of this sum \$261,310.53 has been expended, leaving a net balance of \$6,819.95 on hand.

SEVIER COUNTY
DETAIL OF DISBURSEMENTS
1919

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SEVIER COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES			Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	Expended	
Salina-Sanpete	Earth	\$ 531.34	\$ 4,357.32	Salina Creek	Steel Truss 60 ft.	\$ 258.30	\$ 20,035.39
Richfield-Salina	Earth	680.00	5,163.54	Redmond	Steel Truss 60 ft.	14,888.43	\$ 6,200.23
Richfield-Piute	Earth		2,250.80	Denmark Wash	I-Beams 24 ft.	356.69	2,250.30
Sevier-Millard	Earth	20,169.25	1,385.62				21,554.87
Salina-Emery	Earth	18,010.16	45.95				18,056.11
Burrville-Fish Lake	Earth	17,526.27	1,189.97				18,716.24
Sigurd-Piute	Earth	2,422.23	1,968.45	Sigurd Bridge	Steel Truss 60 ft.	68.89	4,459.57
Richfield City	Concrete	26,814.64					26,814.64
Miscellaneous							1,875.28
Total.....		\$ 86,153.89	\$ 16,361.15			\$ 15,572.31	\$119,962.63

SUMMIT COUNTY—**Statement of
APPROPRIATIONS AND DISBURSEMENTS****In
SUMMIT COUNTY****1919-1920**

At the beginning of the biennium there was the net sum of \$295.69 remaining in the State Road Fund available for use in Summit County. During the biennium \$56,579.34 was raised by Special Road Tax Levy, the State appropriated \$159,500.00, and the Federal Government appropriated \$2,000.00, making a total of \$218,375.03, which has been available for road construction. Of this sum \$213,530.41 has been expended, leaving a net balance on hand of \$4,844.62.

SUMMIT COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS			BRIDGES		Total Disburse-ments	
	Type	Construction	Maintenance	Name	Type and Span		Expended
Coalville-Echo	Earth	\$ 951.11	\$ 3,326.48	Mill Race Rock Port-Lane Br. Wanship Bridge Silver Creek Bridge Echo Creek Bridge Wanship-Silver Creek Bridge Hoytsville Store Br. Oakley Bridge	I-Beam Conc. 14 ft. Wood 10 ft. Steel Wood Conc. 70 ft. Wood and Stone 13 ft. Wood and Conc. 29 ft. Wood and Stone 20 ft. Wood and Stone 15 ft. Wood Truss 50 ft.	\$ 1,484.21	\$ 4,277.59
Coalville-Peoa	Earth	13,664.62	\$ 5,557.84				\$ 20,706.67
Echo-Henefer	Earth		991.38				991.38
Henefer-Croyden	Earth		59.00				59.00
Henefer-Emigrant Tr.	Earth						20.00
Henefer-Narrows	Earth	140.01	675.73				815.74
Kamas-Wasatch	Earth	5,318.61	1,306.19				6,624.80
Park City Roads	Earth						
Park City-Daly Judge	Earth						1,454.38
Park City-Kamas	Earth					1,087.52	2,272.76
Park City-Peoa	Earth	3,407.31	1,283.56			989.20	4,259.57
Park City-Salt Lake	Earth	25,295.10	12.79				12.79
Park City-Wasatch	Earth	119.73	3,497.43				28,792.53
Peoa-Kamas	Earth	2,220.16	903.53				1,023.26
Echo-Rich	Earth	2,227.47	4,164.15			4,005.49	10,389.80
Kimballs-Wanship	Earth	22,945.68	307.26				2,534.73
Miscellaneous	Earth		3,100.62				26,046.30
Total.....		\$ 76,289.80	\$ 26,038.22			\$ 7,953.28	\$125,323.86

SUMMIT COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Coalville-Morgan	Earth	\$ 1,932.82	\$ 6,337.51	Sta. 98 + 40 Echo No. 1 Echo No. 2	Concrete 18 ft.	\$ 8,270.33
Echo-Rich	Earth	21,081.52	2,272.91		Concrete 16 ft.	246.82
					Concrete 16 ft.	217.63
Park City-Kimballs	Earth	112.60	18,867.44			206.68
Park City-Wasatch	Earth	* 122.77	1,796.71			
Wanship-Kamas	Earth	291.30	5,688.62			24,025.51
Peoa-Kamas	Earth		578.75			18,980.04
Kamas-Wasatch	Earth	2,000.00	2,678.40			1,673.94
Kimballs-Wanship	Earth	5,413.76	7,678.10			5,979.92
Wanship-Coalville	Earth	893.81	4,420.57	Silver Creek		578.75
Miscellaneous					Concrete 20 ft.	4,678.40
Total.....		\$ 31,603.04	\$ 50,319.01			13,091.86
						5,531.22
						5,896.58
						\$ 88,206.55

* Credit covering empty cement sacks returned.

Statement of
TOOELE COUNTY—
APPROPRIATIONS AND DISBURSEMENTS
In
TOOELE COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$6,500.34 remaining in the State Road Fund available for use in Tooele County. During the biennium \$54,416.55 was raised by Special Road Tax Levy, and the State appropriated \$23,200.00, making a total of \$84,116.89, which has been available for road construction. Of this sum \$84,068.81 has been expended, leaving a net balance of \$48.08 on hand.

Construction Camp, Lincoln Highway, Tooele County.

TOOELE COUNTY
DETAIL OF DISBURSEMENTS
1919



TOOELE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Grantsville-Wendover	Earth	\$ 23,512.18	\$ 8,555.67			\$ 32,067.85
Grantsville-Mills	Earth	15.00	741.26			756.26
Tooele-Clover	Earth	7.50	3,905.72			3,913.22
Clover-Orr's Ranch	Earth		622.81			622.81
Orr's Ranch-Nevada	Earth	8.20	589.27			597.47
Tooele-Salt Lake	Earth		3,048.20			3,048.20
Miscellaneous						1,451.06
Total.....		\$ 23,542.88	\$ 17,462.93			\$ 42,456.87

UINTAH COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
UINTAH COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$3,238.06 remaining in the State Road Fund available for use in Uintah County. During the biennium \$33,515.03 was raised by Special Road Tax Levy, and the State appropriated \$36,500.00, making a total of \$73,253.09, which has been available for road construction. Of this sum \$72,845.20 has been expended, leaving a net balance of \$407.89 on hand.

UINTAH COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Jensen-Colorado	Earth	\$ 1,390.99	\$ 1,251.10	Monties Creek	Wood Rock 18 ft.	\$ 2,642.09
Vernal-Duchesne	Earth	\$ 12,655.42	\$ 8,097.02	Uintah River	Wood Rock 80 ft.	
				West Uintah River	Wood Rock 22 ft.	
				East Uintah River	Wood Rock 20 ft.	
				East Uintah Canal	Wood Rock 20 ft.	
				East Uintah Culv.	Wood Rock 3 ft.	
				Moffat Gulch	Logs, Plank 12 ft.	
Vernal-Jensen	Earth	542.88	3,675.56	White River	Wood Suspension 130 ft.	26,238.18
Vernal City	Earth		388.82			4,218.44
Miscellaneous						388.82
Total.....		\$ 14,589.29	\$ 13,412.50		\$ 5,485.74	\$ 35,782.87

UINTAH COUNTY
DETAIL OF DISBURSEMENTS
1920

UTAH COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
UTAH COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$2,560.55 remaining in the State Road Fund available for use in Utah County. During the biennium \$261,363.11 was raised by Special Road Tax Levy, the State appropriated \$668,460.00, and the County appropriated \$42,427.00, making a total of \$974,810.66, which has been available for road construction. Of this sum \$965,886.95 has been expended, leaving a net balance of \$8,923.71 on hand.

UTAH COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	Expended
American Fork City ranch	Earth	\$ 1.00	\$ 1,874.78			\$ 1.00
Lake	Earth	121.07	33.28			1,874.78
Lehi City	Earth	23.40	1,201.62			154.35
Lehi-Tooele	Earth	433.62	18.60			1,235.92
Payson City Road	Earth	30,267.57	777.41			18.60
Pleasant Grove City	Concrete	71.90	4,855.26			1,211.03
Provo Canyon Road	Earth	415.25	8.10			25,420.41
Provo City Roads	Concrete	368.32	1.65	Upper East Union Canal Thayer	Concrete 12 ft. Wood Truss 60 ft.	488.80
Provo-Salt Lake	Concrete	9,649.96	13.50			7,069.97
Provo-Spanish Fork	Earth	141,607.09	353.25	Canal Crossing Provo River	Concrete 16 ft. Steel and Masonry 100 ft.	10,056.71
	Concrete	20.83	1,600.62			2,488.46
	Earth	3,842.86	2,137.85	Spring Cr. Culv.	Concrete 8 ft.	16,066.79
	Concrete	13.56	321.98			2.25
	Earth	1,594.62	453.40			4,634.06
	Concrete	4,795.12	4.76			4.75
Spanish Fork-Juab	Earth	1,864.80	671.27			2,265.59
Spanish Fork-Thistle	Concrete	14.50	18.00			4,813.12
Springville City Roads	Earth	247.97	1,083.23	Spanish Fork	Concrete 50 ft.	127.76
Springville-Spanish Fork Canyon	Earth	208.67	10,282.00			2,000.29
	Earth		251.53			10,529.97
						480.30

UTAH COUNTY
DETAIL OF DISBURSEMENTS
1919—(Continued)

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	Expended
Thistle-Carbon	Earth	4,503.45	15,378.06	Gilluly Colton-Willow No. 2 Kyune No. 5 Price River Kyune No. 3 Kyune No. 4 Kyune No. 1 Kyune No. 2 Soldier Fork No. 3 Soldier Fork No. 2 Soldier Fork No. 1 Tucker White Creek Soldier Creek No. 4	Wood Truss 148 ft. Wood 38 ft. Wood Truss 30 ft. I-Beam 30 ft. Wood 15 ft. Wood 10 ft. Wood 20 ft. Wood 10 ft. Wood 22 ft. Wood 24 ft. Wood 20 ft. Pine Post 24 ft. Wood 28 ft. Conc. I-Beams 33 ft.	3,617.80 4,295.85 4,695.17 37.02 2,402.91 1,912.62 9.68 9.68 29.21 2,210.25 13.54 34.74 15.97 1,129.44
Thistle-Sanpete	Earth		2,207.78			40,295.39
Orem-Provo Canyon	Earth		876.71			2,207.78
Miscellaneous	Earth			Olmstead	Conc. 20 ft.	1,597.41
Total.....		\$200,103.56	\$ 41,229.64			8,101.74
						\$ 40,027.75
						\$289,462.69

* Credit covering remittance from Payson City for their proportion of paving costs, and return of empty cement sacks.

Paving Provo-Salt Lake Road, Utah County.

Provo-Salt Lake Road, Utah County.

UTAH COUNTY
DETAIL OF DISBURSEMENTS
1920

UTAH COUNTY
DETAIL OF DISBURSEMENTS
1920—(Continued)

NAME OF ROAD	ROADS		BRIDGES		Total Disburse-ments
	Type	Construction	Maintenance	Name	Type and Span
Lehi City	Concrete	18,182.55			
American Fork City	Concrete	68,152.14			
Provo City	Concrete	56,800.92			
Miscellaneous					
Total.....		\$605,010.92	\$ 22,137.82		\$ 44,361.41
					\$676,424.26

* Credit covering return of empty cement sacks.

Spanish Fork Bridge, Utah County.

State Gravel Plant at Mount, Utah County.

WASATCH COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
WASATCH COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$275.41 remaining in the State Road Fund available for use in Wasatch County. During the biennium \$33,135.69 was raised by Special Road Tax Levy, and the State appropriated \$176,400.00, making a total of \$209,811.10, which has been available for road construction. Of this sum \$203,109.02 has been expended, leaving a net balance of \$6,702.08 on hand.

WASATCH COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Heber-Duchesne	Earth	\$ 31,886.58	\$ 1,589.11	Deer Creek	Concrete 15 ft.	\$ 33,475.69
Heber-Midway	Earth		89.75			89.75
Heber-Park City	Earth	205.91	564.36			770.27
Heber-Utah	Earth	13,315.52	3,117.71			16,795.87
Park City-Kamas	Earth	30.00	277.98	Charleston Bridge	Wood Conc. 50 ft.	355.98
Midway-Charleston						
Midway-Riverdale						
Stewart's Ranch-Wasatch	Earth	10,698.75	11.13			10,698.75
Miscellaneous						1,444.44
Total.....		\$ 56,136.76	\$ 5,650.04		\$ 410.64	\$ 63,641.88

WASATCH COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disburse-ments
		Construction	Maintenance	Name	Type and Span	
Heber-Fruitland	Earth	\$ 17,793.84	\$ 1,923.19	Deer Creek	Concrete 15 ft.	\$ 19,717.03
Stewart's Ranch-Duchesne ..	Earth	2,500.00				2,500.00
Heber-Summit	Earth	169.75	2,694.12			2,863.87
Heber-Utah	Earth	111,370.83	1,973.76			113,557.75
Miscellaneous						828.49
Total		\$131,834.42	\$ 6,591.07			\$ 189,467.14

WASHINGTON COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
WASHINGTON COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$1.01 remaining in the State Road Fund available for use in Washington County. During the biennium \$9,029.49 was raised by Special Road Tax Levy, the State appropriated \$137,994.61, and the Federal Government appropriated \$8,055.39, making a total of \$155,080.50, which has been available for road construction. Of this sum \$152,145.68 has been expended, leaving a net balance of \$2,934.82 on hand.

Dugway, Shem Reservation, Washington County.

Factory Creek Bridge, Washington County.

**WASHINGTON COUNTY
DETAIL OF DISBURSEMENTS
1919**

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
La Verkin-Zion Canyon	Earth	\$ 71.59	\$ 1,611.64	La Verkin	Howe Truss 60 ft.	\$ 1,683.23
	Concrete	53.28		Peter's Leap	Wood Masonry 25 ft.	206.98
	Earth	428.61	2,541.02	Dry Creek	Logs 18 ft.	2,969.63
	Earth		159.95	Sandy Wash	Wood Conc. 18 ft.	159.95
St. George-Anderson's				North Creek	Masonry Steel Truss 60 ft.	948.38
	Earth	10,755.44	953.13	Mesquite	Conc. Steel Masonry 12 ft.	11,708.57
	Earth	785.20	4,301.20	Harrisburg		5,086.40
				Cottonwood		14,995.98
St. George-Arizona				Washington Creek		2.93
				Middleton Creek		* 1,923.61
				Factory Creek		1,195.12
				Shevitt Indian		4,290.25
St. George-Modena	Earth	64.09	1,120.49	Volcanic Wash	King Post Truss on Pile Bents 24 ft.	85.58
	Concrete	18,940.95				1,634.45
Miscellaneous	Earth	33,141.69	8,172.59			41,314.28
Total		\$ 64,240.80	\$ 13,860.02			\$ 78,100.82

* Credit to adjust erroneous charge on prior accounts.

WASHINGTON COUNTY
DETAIL OF DISBURSEMENTS
1920

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WAYNE COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
WAYNE COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$7,620.23 remaining in the State Road Fund available for use in Wayne County. During the biennium \$6,259.70 was raised by Special Road Tax Levy, and the State appropriated \$4,800.00, making a total of \$18,679.93, which has been available for road construction. Of this sum \$18,653.15 has been expended, leaving a net balance of \$26.78 on hand.

WAYNE COUNTY
DETAIL OF DISBURSEMENTS
1919

NAME OF ROAD	ROADS		BRIDGES		Total Disbursements
	Type	Construction Maintenance	Name	Type and Span	
Loa-Freemont	Earth	\$ 8.00			\$ 8.00
Loa-Hanksville	Earth	230.36	\$ 4,997.26		5,227.62
Loa-Piute	Earth		165.00		165.00
Miscellaneous					947.59
Total		\$ 238.36	\$ 5,162.26		\$ 6,348.21

WAYNE COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS		BRIDGES		Total Disbursements
	Type	Construction Maintenance	Name	Type and Span	
Hanksville-Loa	Earth	\$ 5,536.13	\$ 5,753.15	Hanksville	\$ 11,323.16
Miscellaneous				Pile Trestle 450 ft.	981.78
Total		\$ 5,536.13	\$ 5,753.15		\$ 12,304.94

* Credit to adjust erroneous charge on prior accounts.

WEBER COUNTY—

Statement of
APPROPRIATIONS AND DISBURSEMENTS
In
WEBER COUNTY
1919-1920

At the beginning of the biennium there was the net sum of \$9,008.94 remaining in the State Road Fund available for use in Weber County. During the biennium \$147,966.06 was raised by Special Road Tax Levy, the State appropriated \$310,488.36, and the Federal Government appropriated \$22,317.24, making a total of \$489,780.60, which has been available for road construction. Of this sum \$419,456.68 has been expended, leaving a net balance of \$70,323.92 on hand.

Ogden-Huntsville Road, Weber County.

Ogden-Huntsville Road, Weber County.

WEBER COUNTY

DETAIL OF DISBURSEMENTS

1919

NAME OF ROAD	Type	ROADS		BRIDGES		Total Disbursements
		Construction	Maintenance	Name	Type and Span	
Eden-Cache	Earth	\$ 17.79	\$ 505.96			\$ 540.80
	Concrete	14.64				
Devil's Gate	Bitulithic		2.41			12,971.86
	Earth	2,914.79	10,041.64			
Five Points-Plain City	Concrete	15.43				508.63
	Earth	126.57	370.54			
Ogden-Box Elder	Bitulithic		11.52			24,825.97
	Earth	363.47	304.18			
	Concrete	23,908.30	227.27			56,266.72
	Bitulithic	12.75	10.00			
Ogden City Roads	Earth	70.60	178.71			18,057.53
	Concrete	* 4,324.97				
Ogden-Davis	Bitulithic	60,342.38	611.93	Riverdale Overhead Crossing		18,850.68
	Earth	68.42				
Ogden-Huntsville	Concrete	16,608.37	114.32			411.77
	Bitulithic	72.50	14.80			
	Earth	534.35	16,161.47			853.09
	Concrete	44.70	110.83	North Fork River		
	Bitulithic	47.95	1,660.63	Ogden Rr. Br. No. 1		58,759.15
	Earth	397.07				
Ogden-Wilson	Bitulithic	14.70				49.42
	Earth	353.09				
Riverdale-Davis	Earth	281.43	552.37	Canal Crossing	Steel Conc. 20 ft.	129.96
	Earth	9.68	.70	Canal Crossing	Concrete 12 ft.	
Ogden-Hooper	Concrete	17,906.33	813.80	Canal Crossing	Concrete 8 ft.	47.01
	Bitulithic	38,968.45				
	Macadam					

WEBER COUNTY
DETAIL OF DISBURSEMENTS
1919—(Continued)

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Wilson-Warren	Earth	21.49	1,006.65			1,057.45
Huntsville-Randolph	Macadam	15.15	14.16			571.17
Miscellaneous	Earth	571.17				4,331.03
Total		\$159,376.50	\$ 32,713.89		\$ 1,084.33	\$197,505.85

WEBER COUNTY
DETAIL OF DISBURSEMENTS
1920

NAME OF ROAD	ROADS			BRIDGES		Total Disbursements
	Type	Construction	Maintenance	Name	Type and Span	
Ogden-Huntsville	Bitulithic	\$ 41,062.34	\$ 12,467.32	Ogden Canyon No. 3	Concrete 20 ft.	\$ 53,703.91
Ogden-Five Points	Concrete	91.24	84.31	Ogden Canyon No. 4	Concrete 20 ft.	175.55
Ogden-Davis	Concrete	4,799.77	3,070.50	Riverdale Crossing	Concrete 110 ft.	8,039.66
Riverdale-Morgan	Earth	121.72	5,076.10			5,197.82
Five Points-Box Elder	Earth	161.21	483.20			644.41
North Ogden-Hot Springs	Concrete	52,319.45	223.24			52,572.69
Ogden-Hooper	Macadam	13,828.26	1,617.02			15,445.28
Boy-Ogden	Concrete	41,388.86	5.60			41,394.46
Washington Avenue	Concrete	37,493.06	100.59			37,593.65
Huntsville-Rich	Earth		162.00			162.00
Miscellaneous						7,021.40
Total		\$191,295.91	\$ 23,289.88		\$ 343.64	\$221,950.83

REPORT OF STATE ROAD COMMISSION

**STATEMENT SHOWING OPERATIONS BY COUNTIES AND ACCOUNTS OF MONEY
OBTAINED FOR BUILDING AND MAINTENANCE OF STATE ROADS FOR
FISCAL YEAR ENDING NOVEMBER 30, 1919**

TABLE 2

	\$	\$	\$	\$	\$	\$
Bever	4,173.70	5,528.03	16,000.00	24,824.51	877.22	
Box Elder	3,344.43	55,113.46	46,000.00	104,260.45	197.44	
CACHE	5,050.71	42,790.87	126,000.00	171,883.32	1,957.76	
Carbon	11.92	15,707.18	107,000.00	121,895.40	823.70	
Daguerre	7,580.79	2,084.95	16,000.00	27,086.84	578.90	
Davis	14,039.18	36,679.25	348,000.00	395,779.84	1,039.06	
Duchesne	1,597.27	3,702.19	140,000.00	162,118.73	2,182.78	
Emery	204.50	22,940.34	50,500.00	73,432.18	318.76	
Garfield	4,138.47	505.75	20,000.00	24,132.28	611.94	
Grand	2,880.46	17,362.23	39,500.00	59,441.80	280.95	
Iron	1,489.76	12,036.59	47,500.00	60,094.90	931.45	
Juab	11,074.15	19,973.69	18,500.00	49,296.71	251.03	
Kane	9,162.70	5,667.17	5,000.00	18,679.79	2,150.06	
Millard	432.25	22,122.83	12,000.00	33,086.50	688.08	
Morgan	753.87	8,368.50	13,000.00	21,110.59	1,011.78	
Plute	489.27	6,440.14	17,000.00	19,693.20	4,245.21	
Rich	4,366.97	4,364.64		7,248.35	1,483.26	
Salt Lake	19.06	70,147.75	327,000.00	406,725.43	443.26	
San Juan	10.45	12,616.46	56,500.00	67,652.05	464.86	
Sanpete	16.47	5,409.36	36,000.00	41,401.37	24.46	
Sevier	13.77	13,674.47	138,000.00	141,847.00	8,340.34	
Summit	295.69	25,695.65	98,000.00	126,323.86	667.48	
Tooele	6,500.34	29,416.55	6,000.00	41,611.04	304.95	
Uintah	3,238.06	11,387.98	23,000.00	35,782.87	843.17	
Utah	2,560.55	75,814.42	212,000.00	289,452.69	912.28	
Wasatch	275.41	12,123.85	52,000.00	63,641.88	757.38	
Washington	1.01		100,300.00	100,150.98	1,141.13	
Wayne	7,620.28	2,070.26		8,346.21	2,342.28	
Weber	9,008.94	24,819.74	142,538.36	197,505.85	1,178.48	
Lincoln Highway	4,582.28	50,012.25	95,500.00	156,029.79	3,484.74	
Continental	4,676.42	30,000.00	89,000.00	124,184.03	4,492.89	
Equipment	872.54	2,759.00	26,000.00	27,160.63	1,448.91	
Midland Trail	1,540.77				1,540.77	
Total	\$112,019.99	\$502,341.61	\$3,439,839.36	\$44,317.24	\$8,206,931.31	\$49,575.69

**STATEMENT SHOWING OPERATIONS BY COUNTIES AND ACCOUNTS OF MONEY
OBTAINED FOR BUILDING AND MAINTENANCE OF STATE ROADS FOR
R ENDING NOVEMBER 30, 1920**

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